DOCUMENT RESUME

ED 193 769	EA 012 999

AUTHOR	Haddad, Wadi D.; And Others
TITLE	Education: Sector Policy Paper. Third Edition.
INSTITUTION	World Bank, Washington, D. C.
PUB DATE	Apr 80
NOTE	148p.; Figures and tables may reproduce poorly.
AVAILABLE FROM	World Bank, 1818 H St., N.W., Washington, DC 20433 (single copy free)
EDRS PRICE	MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	Costs; Developing Nations; *Economic Development; Educational Administration; *Educational Development; Educational Finance; *Education Work Relationship; *Efficiency; Elementary Secondary Education; Employment Opportunities; *Equal Education; Foreign Countries; *Literacy; Postsecondary Education; Tables (Data); Vocational Education
IDENTIFIERS	*World Bank

ABSTRACT

The present paper updates the World Bank's interpretation of education development and outlines a policy framework for lending for education. After chapters on the relationship between education and development and on the state of education development, the paper devotes a chapter to each of five issues: the expansion and equalization of educational opportunities, the internal efficiency of education systems, the relationship between education and work, the administration and management of education systems, and the costs and finance of education. Subsequent chapters examine external aid to education, review the World Bank's policies and program in lending, and consider the future policies and program of the bank. The policy framework of the bank is outlined in five principles that reflect the five issues discussed earlier. Extensive tables are appended. (IRT)

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Sector Policy Paper

World Bank, April 1980

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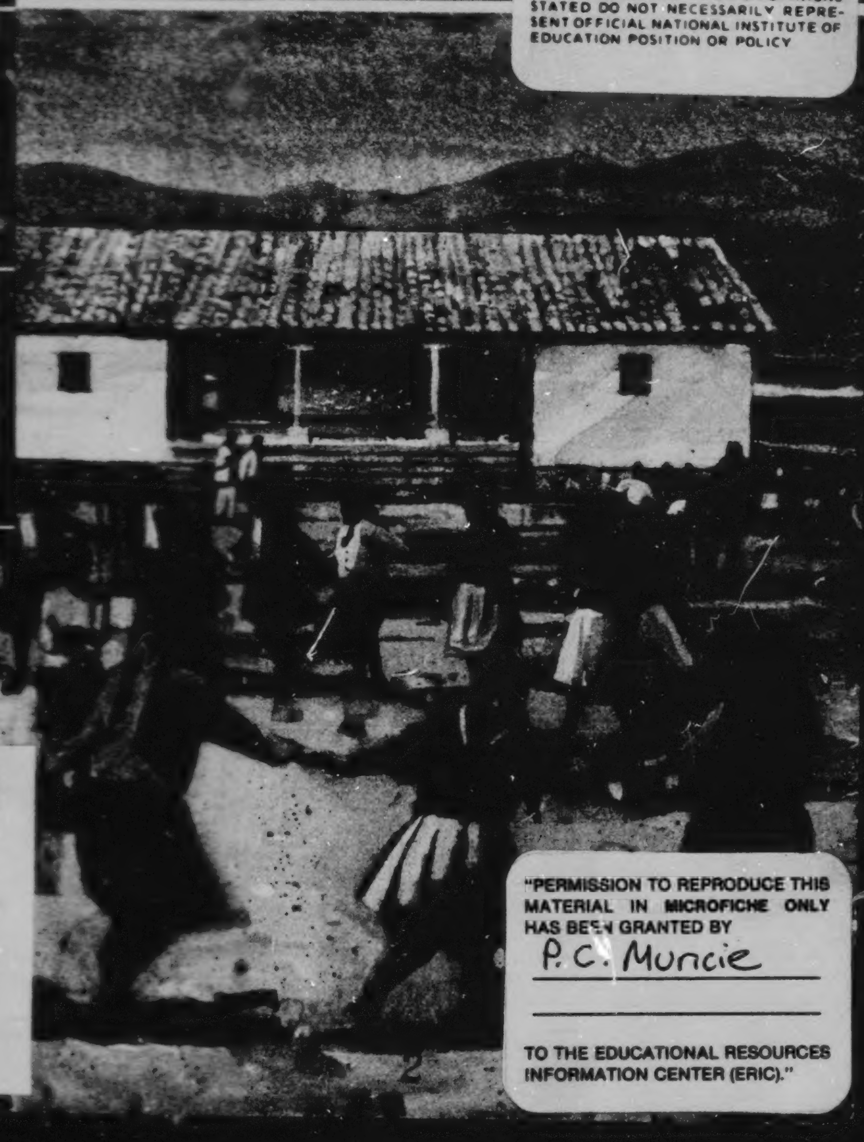

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EDUCATION
Sector Policy Paper

Third Edition
April 1980

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EDUCATION Sector Policy Paper
April 1980

This paper was prepared for presentation to the Executive Directors of the World Bank. It was written by Wadi D. Haddad in collaboration with Aklilu Habte, Mats Hultin, and other members of the Education Department of the Bank, and edited by Emmanuel D'Silva.

EDUCATION

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Introduction

The policy of lending by the World Bank[1] for education has evolved gradually since 1962 when the first education project was approved. From 1963 to 1970, the policy was elaborated in memoranda from the President of the Bank and lending was largely restricted to hardware and those areas of education that directly met the needs for manpower as they were perceived at the time. In 1971, a first comprehensive Education policy paper was issued, which recommended a systematic study of the entire education sector of a country as a prerequisite for financing, and suggested comprehensive aid to education. In 1974 a second sector working paper was issued to reflect a broadening of the Bank's development policy. Four governing principles for aid to education were emphasized: the provision of minimum basic education, meeting critical needs for manpower, efficiency, and equity.

The present paper updates the Bank's interpretation of educational development and outlines a framework of policy for lending to education. The paper is divided into two major parts: the first deals with issues and trends in the development of education (Chapters 1–7), and the second describes the past and future policies and programs of lending by the Bank for education (Chapters 9 and 10) within the context of overall external aid to education (Chapter 8).

*

The Bank's involvement in education since 1962, and up to June 1979, resulted in 192 education projects in 81 countries, most of which were generated in collaboration with the United Nations Educational, Scientific, and Cultural Organization (Unesco) by means of a Cooperative Program started in 1964. These projects span virtually all subsectors of education, and their diversity and shifting concerns reflect the evolution of the Bank's policies. An analysis of the lending program over time shows an increase in aid to primary education, more emphasis on technical education at the expense of general and diversified curricula, and less support for formal agricultural education. Expenditures for the construction of physical facilities remain the principal outlay, although a noticeable increase in technical assistance signifies a new emphasis on substantive aspects of education projects. There has also been a substantial growth in lending for project-related training, and education components have been increasingly included in urban and rural development projects.

During the last two decades, developing countries have achieved substantial progress in education. The Bank's involvement has encouraged educational improvements, modified traditional methods, helped raise local management capacity, and provided a strong

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[1] All references to the World Bank in this paper refer to the International Bank for Reconstruction and Development (IBRD) and the International Development Association (IDA). The fiscal year of these institutions runs from July 1 to June 30. All money terms are expressed in US dollars. A billion equals 1,000 million.

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source of funding for buildings and equipment. Enrollment ratios at all levels have increased at an unprecedented rate. The non-schooling gap (the difference between school-age populations and actual enrollment) at the primary level has narrowed in middle-income countries with income per capita exceeding $521 (in 1975 prices), though not in countries at lower income levels. Enrollment in higher education has expanded at a greater rate than enrollment in secondary education, and enrollment in secondary education has expanded faster than enrollment in primary education. The same pattern is observed in developed countries, athough enrollment ratios at the secondary and tertiary levels in developing countries are still far lower than those in developed countries. It may be that, in some instances, investment in education at higher levels has been too rapid, and at the expense of some other needs of society. The new concepts of development in the 1970s and a growing egalitarian spirit among governments have shifted the emphasis in educational development in favor of democratization in the distribution of education, especially at lower levels.

The initial efforts in educational development during the 1960s were directed toward expanding enrollment rather than changing the character of education. Nevertheless, certain trends emerged: assertion of self-reliance and national identity, broader concepts of development, and growing concern about the capacity of the system to meet the demands placed upon it. In educational development plans of the late 1960s and early 1970s, the emphasis was on qualitative objectives—regard for social equity, development of science teaching, improving the relevance of education to national needs, and the building of a national capacity for management and research in education.

As a result, education systems have become better structured and have extended their reach to areas previously unserved. Serious attempts have also been made to improve the quantitative efficiency and the quality of education systems, and to make them more relevant to indigenous life and culture and to the different needs of regional populations within a country. Many developing countries, in an effort to improve the relevance of education, are reactivating their national languages and moving toward the use of local languages in the early years of formal schooling. Management of education has been strengthened, moreover, and many countries have established units for planning and research and development to cope with the growing complexities of the sector.

Despite these impressive achievements—and to a certain extent because of them—education continues to face problems that complicate further development.

- Although rates of schooling and literacy have substantially increased during the past two decades, nonetheless, about a third of the children of primary-school age in the developing countries are not enrolled in school. Only about a third of those in the 12 to 17 age group and 9 percent of those in the 18 to 23 age group are in school. These enrollment ratios are far below the corresponding ratios in developed countries. About a third of the adult population, moreover, is illiterate. Unless the rate of expansion of education opportunities improves, the total number of children not in school will increase substantially during the next decade.

- Inefficiencies in education keep the number of students in school and the quality of education they receive below what available funds could permit. Quantitative inefficiencies are reflected in high rates of dropout and repetition, low student-teacher ratios, and underused physical facilities. For example, only half of all primary-school entrants reach the fourth grade and 15 percent to 20 percent of school places are occupied by repeaters. Moreover, the quality of learning, as determined by education inputs and student attainment, is low.
- The relationship between education and work, which is at the heart of the problem of efficiency of an education system, suffers from four principal problems: (1) to sustain economic growth, most developing countries face a shortage of technical and managerial skills, and where such skilled manpower is inadequate, enterprises that could provide training also tend to be lacking; (2) such shortages can coexist with unemployment among school graduates because the type of education provided is not always geared to employment opportunities in the economy; (3) formal education tends to be thought of as a passport to jobs in the modern sector and education at each level tends to be a preparation for the next, so that many students are educated beyond the requirements of available jobs; and (4) the differences in the educational environment and the work environment often leave students unprepared for their subsequent work experiences.
- The unprecedented expansion of education systems during the past 25 years has placed heavy demands on the administrators and managers of education. Despite efforts to cope with these demands, the development of national managerial, administrative, and analytic capacities lags behind the growth in size and complexity of the education enterprise. Many systems have poor management procedures, and the distribution of responsibilities for making decisions are unclear among agencies that deal with education and training, or among local authorities, community groups, and schools. Moreover, educational planning, usually carried out at the central government level, has been too much confined to quantitative expansion, or the setting of goals. The need for research and experimentation has not been appreciated, and the knowledge that is available in most developing countries is inadequate for policy decisions and planning.
- Measures to expand and improve the quality of education systems are often constrained by inadequate financial resources. Although, during the past two decades, public expenditures of developing countries for education have, on the average, increased steadily as percentages of both the gross national product (GNP) and the national budget, there has been a decline in these percentages in many countries. Developing countries are spending much less per student than do developed countries, and the differences in unit

costs between the poorest and richest countries are widening. In addition, the present level of external aid to education is considered inadequate to meet the needs of developing countries. Although external aid in the form of grants, loans, and credits amounted to $2.8 billion in 1975, it covered only 9 percent of the total education budgets of developing countries. Moreover, the annual increase in aid has been offset by inflation, particularly in the areas of technical assistance, and the multiplicity of donor agencies has duplicated efforts and strained the capacity of recipients to select appropriate programs. If education systems continue to grow at the present rate and under the same structural and managerial conditions, most low-income and middle-income countries will require funds that are beyond their financial capabilities.

This paper devotes one chapter to each of these five issues (Chapters 3–7), delineates the scope and magnitude of each issue, and suggests a set of strategies and related policies.

*

The World Bank, in response to the persistent needs outlined above, will maintain, in the coming years, a strong concern for general education and training in specific skills. The Bank will assist its developing member countries in the immense process of developing human resources, in bringing about educational change and expansion, and in obtaining the technical capacity and experience to become genuinely self-reliant. In lending for education, the Bank will seek to promote educational development on the basis of the following broad principles:

1. Basic education should be provided for all children and adults as soon as the available resources and conditions permit. In the long term, a comprehensive system of formal and nonformal education should be developed at all levels.
2. To increase productivity and promote social equity, efforts should be made to provide education opportunities, without distinction of sex, ethnic background, or social and economic status.
3. Education systems should try to achieve maximum internal efficiency through the management, allocation, and use of resources available for increasing the quantity and improving the quality of education.
4. Education should be related to work and environment in order to improve, quantitatively and qualitatively, the knowledge and skills necessary for performing economic, social, and other development functions.
5. To satisfy these objectives, developing countries will need to build and maintain their institutional capacities to design, analyze, manage, and evaluate programs for education and training.

These five principles, elaborated in Chapter 10, constitute a policy framework within which the Bank will seek to foster, in a variety of ways, development objectives that are tailored to the needs of its borrowers. In the pursuit of its objectives in lending for education, the Bank will follow a differential pattern adjusted to the variety of conditions in developing countries. In low-income countries, low-cost basic education and rural training will receive emphasis, together with selective support for further development of skills. In middle-income countries, where first-level education is already widely available, emphasis will be placed on the development of skills for increasingly sophisticated economies, improvement of the quality and equity of first-level education, and the development of secondary and higher levels of education. Internal efficiency will be stressed in lending to all countries, and measures to improve it will be required for support of further efforts to expand the system. Similarly, the improvement of managerial and planning capacities will be emphasized for all countries, while the development of analytic skills will be stressed more in the case of middle-income countries. Against this background, priorities in lending for education to individual countries will evolve out of discussions of policy with the borrowers. General strategies to determine the mix of different areas and kinds of assistance may also be developed for groups of countries that have common characteristics, problems, and levels of development, such as those in the Sahel and in Latin America.

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This paper draws extensively on the World Bank's experience during almost two decades of operations, evaluation, research and reflection, and on the October 1978 report of the External Advisory Panel on Education which evaluated the Bank's past and current activities in education and made recommendations for the future conduct of operations in this sector. In addition, the Bank sought information and ideas from the professional community through personal contacts, research reports, state-of-the-art papers and seminars, and from other organizations concerned with education and development—most importantly Unesco, which in addition to its involvement in policy discussions, generously provided most of the statistical data. Drafts of the paper were circulated widely within and outside the Bank for comment, and special seminars were conducted in seven developing and two developed countries to discuss its content. Moreover, the paper was reviewed at three international conferences with wide participation from all over the world. In all, the paper was discussed with more than 200 scholars and development experts, practitioners, and decisionmakers in national governments, universities, research institutions, international organizations and others. We are thankful to all of them for being generous with their time, efforts, and suggestions.

Chapter 1: Relationship Between Education and Development

Education has long been recognized as a central element in development. When the developing countries began their drive for social and economic development nearly three decades ago, education was perceived as a means not only of raising political and social consciousness, but also of increasing the number of skilled workers and raising the level of trained manpower. These benefits, together with the visible gains for individuals from education, stimulated an unprecedented growth of enrollment in primary schools and of substantial investments in education at the secondary and university levels. Although substantial progress was made during the 1950s, educational growth failed to achieve (1) a more equitable distribution of income and social services, and (2) an equilibrium between the productive capacity of the education system and the absorptive capacity of the labor market.

The 1960s witnessed profound changes in the perception of the development process. As the developing countries began to focus on extending the "modern sector" throughout their economies by incorporating twentieth-century industrial processes, it became clear that the modern sector was absorbing a disproportionate share of scarce capital, while the potential of smaller, traditional enterprises was being unduly neglected or sometimes indirectly penalized. Because modern investments tended to accumulate in urban areas, they contributed to migration of people from rural to urban areas and, in some instances, exacerbated urban unemployment. The modern sector failed to absorb the migrants at a pace proportionate to migration. It soon became clear that "national economic growth," by itself, was insufficient to improve the welfare of the poor, rapidly and effectively.

By the late 1960s, the need to widen the definition of "development" beyond a narrow focus on economic production was apparent. In 1970, the General Assembly of the United Nations resolved that "as the ultimate purpose of development is to provide increasing opportunities to all people for a better life, it is essential to expand and improve facilities for education, health, nutrition, housing, and social welfare, and to safeguard the environment."[1] This approach to development is aimed at improving the welfare of human beings, primarily in terms of providing goods and services needed to eliminate manifestations of poverty, such as malnutrition, disease, illiteracy, and squalor. These efforts are not, however, intended as a social service to marginal populations, but rather, they are the nucleus of an overall national development effort. The development of human resources not only helps alleviate poverty, but also contributes significantly to growth in national productivity and income.

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[1] See United Nations. *Resolutions Adopted by the General Assembly during Its Twenty-fifth Session, 15 September–17 December, 1970.* Supplement No. 28 (A/8028). (New York: United Nations, 1971), p. 41.

This concern was highlighted by Robert S. McNamara in his presidential address in 1973 in Nairobi.[2] "The (economic) growth is not equitably reaching the poor. And the poor are not significantly contributing to growth," Mr. McNamara said, and added, that it was not wise to concentrate on the modern sector in the hope that its high rate of growth would filter down to the rural poor. Measures would have to be taken that would more directly benefit the poor, especially those in the rural areas. The concern for growth was, therefore, expanded to include the goals of income distribution and of satisfying the basic needs of all members of society. At the 1977 Annual Meetings of the Bank and the International Monetary Fund, held in Washington, Mr. McNamara outlined the components of the basic needs that must be met if poverty is to be overcome—specifically, food with sufficient nutritional value, shelter and clothing, education, clean water, and health care.

This comprehensive approach to development underlines the significance of education in three interrelated ways.

- *As a basic human need.* People need education to acquire a broad base of knowledge, attitudes, values, and skills on which they can build in later life, even if they do not receive further formal instruction. Such education provides people with the potential to learn, to respond to new opportunities, to adjust to social and cultural changes, and to participate in the political, cultural, and social activities. As societies develop, education becomes a necessary condition for the ability of the individual to identify with the prevailing culture.
- *As a means of meeting other basic needs.* Education influences and is in turn influenced by access to other basic needs—adequate nutrition, safe drinking water, health services, and shelter. Reduction of gastrointestinal diseases and of parasites, for example, which can be achieved through education, clean water, and health programs, considerably increases the nutrition to be gained from a given quantity of food. Conversely, improvements in nutrition, particularly in infants and young children, greatly improve their learning capacity, their overall benefits from education, and ultimately their productivity and income. So, while clean water can make an important contribution to better health, whether it will do so depends on the education and understanding of its users.
- *As an activity that sustains and accelerates overall development.* Education plays several roles. First, it prepares and trains skilled workers at all levels to manage capital, technology, services, and administration in every sector of the economy. Experience has repeatedly shown that development projects are not well implemented unless investment of capital and transfer of technology are accompanied by ade-

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[2] Robert S. McNamara. *Address to the Board of Governors, Nairobi, 1973.* (Washington: World Bank, 1973), pp. 10 and 13.

quate human knowledge and skills. Studies have also shown that economic returns on investment in education seem, in most instances, to exceed returns on alternative kinds of investment, and that developing countries obtain higher returns than the developed ones. Second, through trained personnel, developed methodologies, and institutional settings, education facilitates the advancement of knowledge in pure and applied fields. Third, as concern for the management of the environment, for conservation, for the use of energy, and for achieving a balance between human population and natural resources mounts, education will be expected to raise the consciousness of people and to provide knowledge, skills, and trained manpower to deal with environmental issues. Fourth, rapid economic growth, technological advancement, and social change transform the relationship between the individual and society and may tear down the traditional supports that have provided the social framework for the individual. The ability of individuals to identify with their changing culture and find constructive roles in society depends, to a large extent, on what education can provide by way of self-understanding, better knowledge of the choices available to society, and a critical view of the culture.

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What education can do, however, is constrained by, among other things, the prevailing economic order, political power, and social structure. Education is certainly most effective in settings in which several interrelated policies and programs fostering social and economic improvement are simultaneously at work. But the experience in developing countries during [illegible] past three decades suggests that in the absence of politically planned social change, education does not necessarily act as an agent for maintaining or reinforcing the *status quo*. On the contrary, widely diffused educational activities provoke and facilitate change in prevailing sociopolitical conditions by providing the otherwise disadvantaged persons with a degree of social and economic mobility to break through traditional barriers. With an understanding of political rights and actions, these persons can be active in organizing forces for change in the community and the nation.

One must think of education, therefore, not only as a "sector" of development—parallel, for example, to agriculture or industry—but as a pervasive element that must be integrated—horizontally and vertically—into all development efforts. In its 1978 meeting, the General Conference of Unesco affirmed that "by the very complexity of the problems which it must help to solve, education must be conceived in an interdisciplinary context as a factor of multidimensional development of which man is both the end and the instrument."[3] The concept of education as a pervasive element has several implications. First, education must cover a wide spectrum both in content and in form. The content can range from basic knowledge to advanced research, and from training in living skills to highly sophisticated production skills. The form of education can vary from the most general types of formal schooling to the most specific kinds of nonformal teaching and from the simplest levels of education in literacy and numeracy to the most advanced postgraduate specialties.

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[3] Unesco. *Records of the General Conference, Twentieth Session, Paris, 1978, Volume 1, Resolutions.* (Paris: Unesco, 1978). p. 23.

Second, general education is as essential for attaining development objectives as training in specific skills. Recent studies have shown a positive three-way relationship among primary education, agricultural extension, and productivity on the farm, and an inverse relationship between the size of family and the level of education of both parents, or of the mother. This relationship, however, was not evident in countries with the lowest level of female literacy. More broadly, the complementarity of general education and training in skills is essentially related to the rapid changes that are taking place in developing countries. In such a world, a combination of general education and specific skills is necessary if people are to be able to adapt to change and to take a constructive part in it.

Third, investments in education and training should be balanced with investments in other fields so that learners can become involved in productive tasks in a growing economy.

Fourth, equity in education and national economic development are mutually consistent. More education opportunities in rural areas, for instance, would promote equity, while contributing to a more rapid adoption of improved agricultural methods, the development of industries, and to higher incomes in rural areas. Similarly, increasing education opportunities for women boosts equity and fosters national development. The potential contribution of educated and trained women to the labor force and the importance of their education in the improvement of family welfare and planning are factors still underestimated in national development.

Chapter 2: The State of Educational Development

Objectives and Modes of Delivery

The evolving, multifaceted role of education in the development process underlines the need of every country for a more flexible, comprehensive network of provisions for education and training. Such a network should be diverse enough to respond to the varying needs of learners, yet sufficiently unified to avoid channeling certain groups into dead-end or unnecessarily inferior learning choices. This ideal remains, for many countries, elusive. Indeed, until recently, it was even considered undesirable. Because of the recent expansion of education priorities and systems, however, conscious efforts are being made to make education more responsive to the needs of changing societies. In addition, opportunities for "second chance" education and training for those who never went to school, or who need further education or training specific to their vocations, are offered more widely.

Within this context, modes of delivering education—formal, nonformal and informal—are conceived today not as alternatives but as complementary activities within a single system. Formal education—the institutionalized, graded, and hierarchically structured education system covering primary, secondary, and tertiary levels—is the most prominent mode of delivery. Informal education—the unorganized, lifelong process by which everyone acquires knowledge, skills, and attitudes through experience and through contact with others—provides an important foundation, but it cannot function as a substitute for formal or nonformal education and training. Nonformal education—organized and systematic learning activity carried on outside the formal system—is neither an alternative education system nor a shortcut to the rapid education of a population. Rather, nonformal education and training provides a second chance for learning to those who missed formal schooling; it enables the rural or urban poor, within programs of "integrated development," to acquire useful knowledge, attitudes, and skills; and affords a wide array of learning activities directly associated with work. At present, the design and implementation of programs to meet such objectives are challenging because of the diversity of needs and the relative scarcity of experience that can be drawn upon.

Quantitative Educational Development

All governments have acknowledged their responsibility to provide basic education to their citizens as soon as possible. With some exceptions, formal schooling, which takes three to nine years, is the chosen vehicle for providing it to the school-age population. Six years of primary schooling continues to be the most widely accepted norm, although some poorer countries have recently reduced the number of years, while certain upper middle-income and higher-income developing countries have increased it.

The number of primary-school students enrolled in the developing countries rose from about 117 million in 1960 to more than 236 million in 1975. Similarly, average enrollment ratios at the primary level increased for all categories of countries grouped by per capita income, but the rate of increase declined in each five-year period (see Annexes 1, 2, and 3). Although educational expansion at the primary level narrowed the nonschooling gap—that is, the difference between school-age population and actual enrollment—in countries in the two higher income categories, it did not do so in countries with lower-income levels. Thus, the total number of children not enrolled in school has increased (see Annex 4). These problems are further highlighted by projections for 1985 (see Figure 1).

To maintain a constant nonschooling gap—that is, the number of children between ages 6 and 11 not enrolled in school does not increase above the 1975 level—the lower-income countries must achieve an enrollment ratio of 66 percent for the 6-to-11 age group, while those in the lower middle-income range must reach a ratio of 68 percent. If enrollment in these countries continues to grow at the rate achieved between 1970 and 1975, they will fall short of reaching these modest targets. For countries in the middle-income ranges (above $521 per capita in 1975 prices), maintaining the 1970–75 rates of growth will narrow the nonschooling gap and lead to enrollment ratios of 80 percent and 89 percent, respectively, by 1985.

Clearly, wherever universal primary education[1] has still not been achieved, there are competing claims on resources between (1) increasing the number of years and improving the quality of education offered to those already enrolled, and (2) expanding primary school enrollment; the competition, in other words, is between vertical and horizontal distribution of services. Enrollment in higher education in developing countries has expanded at a greater rate than enrollment in secondary education, and that enrollment at the secondary level has, in turn, expanded at a greater rate than enrollment at the primary level (see Annex 2). The higher rates of growth in enrollment can be explained, in part, by the low initial enrollment ratios at the secondary and tertiary levels. Significantly, this rank order in growth rates by level of education parallels growth trends in the developed countries, although enrollment ratios at the secondary and tertiary levels in developing countries are still far lower than the corresponding ratios in developed countries (see Annex 3). It may still be asked whether in some cases investment in higher levels of education has been too rapid, perhaps at the sacrifice of other needs of society, and whether the demands made during the 1960s by the more articulate and foreeful groups in society for more publicly subsidized education at higher levels have had negative as well as positive effects. In any case, the 1970s have witnessed new concepts of

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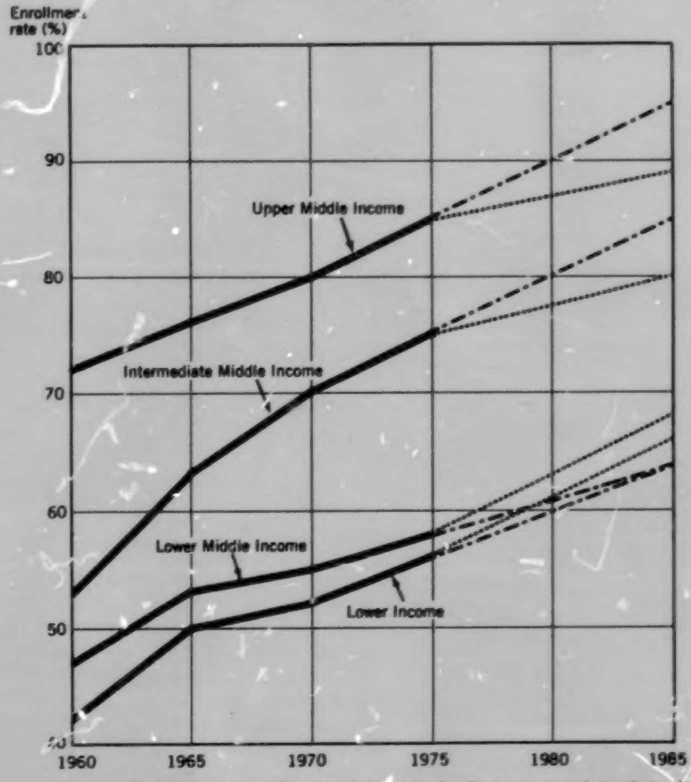
[1] "Universal primary education" refers to a situation in which all children between the ages of 6 and 11 are enrolled in school.

Figure 1

Enrollment Rates of Children Aged 6 to 11 Years for Different Income Groups, 1960–85[1]



.... Projections assuming constant nonschooling gap equal to that of 1975

. — — — Projections based on growth rate equal to that achieved during 1970–1975

[1] For definition of income groups of countries, see Annex 1.

development and a growing egalitarian spirit among governments favoring democratization in the distribution of education, especially at lower levels.

In spite of the emphasis by governments on providing education opportunities and their awareness of education's increasing political role, a large percentage of children continue to be enrolled in private schools in many countries. Data on private education are incomplete because of the difficulty in collecting information and the diversity of definitions of private institutions. However, available data indicate a slight decrease in the proportion of enrollment in private schools at both primary and general secondary levels between 1965 and 1975. But there were at least five countries in 1975 in which the proportion of students enrolled in private primary schools was 50 percent or more, and 14 countries in which the proportion was 25 percent or more (see Annex 16). Similarly, the proportion of enrollment in private secondary schools was 50 percent or more in seven countries and 25 percent or more in 28 countries. There is also a marked variation among regions. While the size of private education in the Latin America and Africa regions is large and only slightly decreasing, in Asia, and in Europe, Middle East and North Africa regions, it is relatively small and decreasing more rapidly.

Qualitative Educational Development

Education plans and programs in the developing countries during the 1960s were aimed at expanding enrollment rather than changing the character of education. Although newly independent countries began to replace foreign elements in their curricula with content related to their national culture and conditions, these changes did not significantly alter other aspects of the education systems, such as the structure of cycles, the language of instruction, school calendars, and teaching and examining techniques.

Nevertheless, during the 1960s certain trends emerged: a strong assertion of self-reliance and indigenous national identity, broader concepts of development, and concern about the capability of the education systems to meet the increasing demands for education. In educational development plans prepared in the late 1960s and early 1970s, qualitative objectives were emphasized. A review of more than 35 such plans in 17 countries revealed a concern for (1) social equity, (2) development of science teaching, (3) improvement of the internal and external efficiencies of the school system,[2] (4) the relevance of education to national needs—by producing relevant textbooks, for example, by revising curricula, reforming the educational structure, and by directing the universities toward research on local problems, and (5) building national capacity for management and research in education.

The new trends were dominant in three areas: "relevance" of education, the use of language, and institutionalization of educational development. The issue of relevance was derived from the function of education in identifying and sustaining the historical, cultural, and religious traditions of a country and fulfilling its needs as a modern, changing entity. The issue of relevance, thus, involves a process of rethinking the substance of education to assert the "national character of education" in the direction of both "authenticity and modernity," which are seen as "an effective combination for rejecting, at the level of institutions and at the level of content, imported patterns and ready-made formulae."[3] The concept of relevance pertains not only to the relationship between the national life and culture and the external world, but also to the educational needs of different population groups within a country, especially ruralists, women, migrants, and ethnic groups.

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[2] "External efficiency" refers to the effect of education on economic and social development in the community at large.

In countries where foreign languages have become the media of instruction, efforts to improve the relevance of education include a reactivation of national languages. Understandably, this issue is politically and culturally sensitive. But in many countries, programs of research and curriculum reform have already been initiated to reintroduce local languages into the education system. In certain countries, such as Mali, language and literature bureaus have been established to coordinate language policy, literacy, and curriculum work. In others, such as Egypt, support has been given to basic efforts to generate a technical vocabulary in the national language in specialized fields. The emphasis on local languages can, however, diminish an individual's chances for further education and limit the access of specific groups or countries to the international body of knowledge.

Many developing countries are moving toward the use of local languages in the early years of formal schooling because literacy is most readily acquired in the language the learner already speaks. There is no conclusive evidence, however, that competence in a second language is more easily acquired if the student is already literate in his native language. In fact, studies seem to indicate that teaching for literacy in a second language is unlikely to succeed without prior oral training in the new language. At the same time, bilingual programs do not, apparently, retard the development of children in their native language. In adult literacy training, instruction in the local language is typical, because knowledge of a second language is not usually an objective. Use of oral and visual media may sometimes be necessary if literacy cannot be acquired in a commonly spoken language.

The persistent attempts to use local languages have met with problems of implementation. In many countries, combinations of international, regional, and local languages make it difficult to establish a clear and workable language policy. The conflict is not only between national and foreign languages, but also between the national language and other local languages. At higher levels of formal education and in the training of technicians and professionals, the adoption of local languages is difficult even where they are used nationally. At the secondary level, for example, past dependence upon foreign books and teachers, often made available through foreign assistance programs, inhibits a shift to the national language. In higher education, the dependence upon external sources of knowledge, advanced training, and a continuing flow of research creates further difficulties.

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[3] Resolution adopted at the Conference of African Ministers of Education in Lagos, Nigeria, in 1976.

To nationalize the education system, to make it relevant, and to respond to its growing complexities, many developing countries have established units for planning, research, and development, usually with support from international agencies. Unfortunately, many of these units have suffered from a lack of trained staff, an absence of national development plans and basic data, insufficient commitment and competence of implementing agencies, and a want of consensus at various levels regarding education policies and programs. In recent years, however, efforts have been made to establish a broad national consensus on guidelines for educational development. In 1969, for example, a presidential commission was established in the Philippines to survey the state of education and its relevance to development goals and to formulate guidelines for educational development. In the Ivory Coast, a wide-ranging review of the education system was undertaken with broad national participation. Similar reviews have been carried out by the National Committee on Educational Objectives and Policies in Kenya, the Commission for Educational Reform in Peru, the National Center for Educational Research and Development in Lebanon, and analogous bodies in other countries.

The desire for improvements in the quality of education has clearly increased, but serious problems in implementing innovations remain. Serious efforts are expected to be made during the next several decades to make education systems genuinely relevant. Measures will include the designing of new curricula and syllabi, the production and distribution of better learning materials, the training of teachers in new modes of education, the use of local languages wherever possible, and—most important—the development of a national capacity for the analysis, design, and management of an education system.

Major Issues Facing Educational Development

Substantial progress has been made in educational development since the 1950s: enrollments have increased at an unprecedented rate, local leadership cadres have been formed, and education systems and institutions have become better organized and have extended their reach to areas previously unserved. Despite these impressive achievements, and to a certain extent because of them, education continues to face problems that complicate further development. First, vast numbers of people still lack basic education: 250 million children and 600 million adults have had only limited access or no access at all to formal schooling. The problem of the "pupil explosion" is growing as the proportion of youth in the population of the developing world increases and the demand for education overwhelms the supply of physical resources. In addition, education opportunities within countries are inequitably distributed.

Second, inefficiencies keep both the number of students in school and the quality of education they receive much below what the available funds might permit. As a result, only half of those who enter primary school reach the fourth grade, repeaters occupy 15 percent to 20 percent of school places, and academic achievement is far below desired levels. Third, there is a serious form of external inefficiency in that a large percentage of those leaving school, whether by graduation or not, do not find appropriate employment. Fourth, the capacity for managing the education sector and the scope of continuing research in education are incommensurate with the complexity and vital significance of the field. Much is expected from education, which has complex roots in several scientific and technical disciplines, each with its own body of knowledge. Yet, in developing countries, the base and the capacity for analysis and experimentation in education are inadequate compared with most other fields. Experience has demonstrated that unless education systems are well managed and oriented toward research, they will become obsolete, wasteful, and irrelevant to changing national needs. Finally, policies and programs for expansion and improvement of these systems are constrained by the inadequate resources allocated to them.

These five principal issues are further explored in Chapters 3 to 7; the scope and magnitude of each topic are delineated, and a set of strategies and related policies is suggested.

Chapter 3: Expanding and Equalizing Education Opportunities

Nature and Scope of the Issue

In December 1948, the United Nations adopted its *Universal Declaration of Human Rights.* Article 26 states: "Everyone has the right to education. Education shall be free, at least in the elementary and fundamental stages. . . . Technical and professional education shall be made generally available and higher education shall be equally accessible to all on the basis of merit."[1] Three decades later, this objective is far from having been achieved. In the developing countries, less than 65 percent of children between the ages of 6 and 11 years are enrolled in school, and, of them, only about 50 percent reach the fourth grade. The enrollment ratios of the 12-to-17 and 18-to-23 age groups are about 38 percent and 9 percent, respectively. The situation varies significantly among regions and countries (see Annex 7).

If the trends observed between 1960 and 1975 persist, enrollment ratios for developing countries in 1985—according to Unesco projections—will be 68 percent for the age group 6 to 11 years, 42 percent for the age group 12 to 17, and 12 percent for the age group 18 to 23. Further, disparities in enrollment among countries and regions will continue. For instance, only seven of the 24 Latin American countries, with 18 percent of the population of the region, will have less than 80 percent of their 6-to-11 age group in school. On the other hand, 28 of the 46 African countries representing 77 percent of the population of the region, and 14 of the 27 Asian countries, with 88 percent of the population of the region, will fall below this enrollment level. Youth not in school in the developing countries, moreover, will increase by about 30 million. To maintain the current primary enrollment ratio in the face of pressing population growth, enrollment must increase about 30 percent between 1975 and 1985.

Provision of basic education to the adult population target group—defined here as those between the ages of 15 and 45—is likewise inadequate. While the percentage of adult illiterates in developing countries declined from 44 percent to 32 percent between 1950 and 1975, the absolute number is steadily increasing; from 544 million in 1970, it had reached about 600 million by 1978 and is not expected to turn downward before the year 2000. During the 1950s and 1960s, more than 100 countries supported general adult literacy programs. These programs were frequently offered as an alternative to primary schooling, but they generally used primary-school teachers. Because these programs seldom proved effective, Unesco launched, in the late 1960s, a functional (work-related) program on an experimental basis with a more selective and purposeful focus. Projects within this program were not intended for mass audiences, but even as pilot projects they were generally unsuccessful.

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[1] United Nations. *A Compilation of International Instruments of the United Nations.* (New York: UN, 1967)

In addition, there are unequal education opportunities within countries based on sex, socioeconomic status, and different regional, rural, urban, and, sometimes, ethnic background. Of all the disparities, none is of greater hindrance to development than that based on sex. If the greatest single obstacle to improvement in general living conditions is continuing population growth, and if the social, economic, and educational status of women significantly affects fertility levels, then the education opportunities available to women are of crucial importance. Aggregate data for 1977 for developing countries as a group show wide disparities between male and female enrollments compared with virtual parity in developed countries (see Annex 7). While the enrollment ratio of boys between the ages of 6 and 11 was 72 percent in developing countries, that of girls was only 56 percent. Similarly, enrollment ratios of males and females aged 12 to 17 years were 44 percent and 32 percent, respectively; those for ages 18 to 23 were 11 percent and 6 percent, respectively. Within these averages there are regional groups and individual countries with even lower female participation. In 1976, for example, of all the children enrolled in the first grade, the percentage of females was 16 percent in Afghanistan, 22 percent in Nepal, 29 percent in Chad, and 34 percent in Pakistan (data derived from Annex 8).

The effects of other factors on enrollment, such as regional differences, urban or rural location, socioeconomic status, and, occasionally, ethnic background are not always clearly distinguishable, since they tend to be coexistent. But a few examples should illustrate conditions common throughout the developing world. In 1971, the countrywide average enrollment ratio for the urban areas in Brazil was 92 percent, but for rural population it was only 52 percent. In 1974, the enrollment ratios in the six northern states of Nigeria, according to preliminary estimates, were 14 percent at the primary level and 2 percent at the secondary level, while in the remaining states collectively, the ratios were 76 percent at the primary level and 6 percent at the secondary level. In 1971, Indonesia had a gross national enrollment ratio of 80 percent in the primary years and 18 percent in the six secondary years. A detailed distribution by corresponding age levels, however, shows a gap of about 15 percentage points between rural and urban children in the first year of primary school, increasing to about 40 percentage points by the last year of secondary school.

Efforts to expand and equalize education opportunities face many constraints. The most obvious and frequent one is lack of resources—not only financial, but also physical and human. Next, geographic and demographic conditions—vast distance, low-density population, harsh environment, and poor communications—make the construction of schools, the supply of books and equipment, and the provision of qualified teachers a difficult and costly task. Another group of constraints arises out of the cultural and sociopolitical characteristics of a country. Enrollment, for example, may not be expanded for fear of threatening vested interests, and education of the female population may be restricted by cultural factors. Finally, many countries lack the analytic and managerial capacity to perceive and implement alternative, more efficient methods of expanding and equalizing education opportunities.

Providing basic education to those out of school is further inhibited by other factors. The target population is dispersed and heterogeneous in its needs and aspirations; the kinds of education and training needed are many, diverse, and often small in scale; the dividends, especially in skills for living, are not readily apparent, so popular receptivity is uncertain; and pilot projects are not easily replicable on a large scale.

Obviously, participation in schooling is determined not only by the education opportunities that are provided, but also by the degree of their use. It is unrealistic to assume that if an educational service is offered, the intended beneficiaries will automatically accept it. For social or economic reasons, some groups may be apathetic toward the education being provided, or not consider it worth the opportunity costs involved. The low demand is evident in many projects where low enrollment rates and high dropout rates indicate that poor people are simply not "buying" the service. The need for education, as defined by planners, may not automatically be transformed into effective demand by certain groups for all or some of their children. For instance, certain families do not consider the education of their daughters a basic need; they doubt education will have any positive effect on their daughters' jobs, on their acquiring husbands, on their subsequent domestic life, and on their spiritual qualities. The cost to parents of sending their children to school may also be prohibitive. In India, for example, 40 percent of the children between the ages of 6 and 11 who are not in school must work almost fulltime to supplement family income.

Improving Education Opportunities

Expanding and equalizing education opportunities imply access to prospective participants in all parts of a region, and equal, or nearly equal enrollment ratios for various segments of the population. By setting such goals, policymakers can identify inadequacies in the provision of education, rationalize plans for the distribution of educational services, and establish norms to provide opportunities to the extent the limited resources will permit. By improving mechanisms to meet basic education needs, mobilizing local resources, and planning the location of schools, access to education can be improved. Where initial access is already adequate, efficiency measures to reduce per capita cost become more significant. At the same time, the appropriateness of the educational services to the society concerned and the quality of their components should be ensured. These measures are discussed in more detail in the following pages.

Improving Resources to Meet Basic Education Needs

The first element of a strategy for extending basic education is flexibility in the modes of delivery. In countries where conventional primary schooling does not reach all children of school age, there is a growing tendency to use whatever means of delivery are available and to adapt them toward a unified educational system. There is also increasing experimentation with systems where the education of students begins in different ways but eventually feeds or "bridges" into the channels oriented toward continued education. In Bangladesh, for example, literate housewives have instructed groups of about 10 children for two to three years prior to their entering regular schools. In Afghanistan, Mauritania, and Nigeria, efforts are being made to use Koranic schools as feeders into the regular primary schools. Sudan is considering adapting both Koranic and "community" schools to a four-year course that will lead, by way of fifth-grade and sixth-grade "complementary classes," into the mainstream of education. There are also a number of "nuclear" systems, where a group of schools having only four grades feed into a school that has six grades in the same area from which a school draws its students. This approach offers a minimum of four years of schooling to the maximum number of persons and a chance for each to compete for advancement. Latin America is experimenting with various types of the nuclear approach.

Second, horizontal expansion of education as a basic human need for all, as opposed to qualitative expansion for a few, represents a conflict of priorities that necessitates a compromise—at least during the short and medium terms—within the context of prevailing social structures. In some African and Asian societies where social units, such as the joint family, are closely knit, "equity" may mean ensuring that the ablest members of the family—in most countries the ablest males—attend secondary school and beyond, rather than guaranteeing that all persons attend a primary school.

Finally, resources for basic education can be increased by using the services of public employees, teachers outside the school, students, workers, village youth, retired persons, and defense personnel and by mobilizing community organizations. In Sri Lanka, for example, living and production skills are taught to the majority of the rural population through Rural Development Societies.

Encouraging Local Initiative and Self-help

Local communities can take initiative and mobilize local resources, such as labor, building materials, finance, and teaching talent which might go untapped in a highly centralized system. The danger remains, however, that a loosely coordinated system may lead to an uneven distribution of qualified teachers, books, and equipment, and intensify the very inequities the country seeks to reduce. In Northeastern Brazil and Northern Nigeria, for instance, enrollment ratios and quality of input fall below the national averages, in part, because of low incomes. Clearly, financial and technical assistance from the central government will be crucial until local economic and social progress can support the educational effort. Another problem associated with self-help is the danger of creating low-quality schools because the demand of local communities for education and their ability and willingness to build educational institutions cannot be matched by the critical education inputs from the central government.

School Location Planning

"School location planning" is a technique that combines both centralized and decentralized types of planning. It determines the distribution, size, and spacing of schools and, where possible, the kind of education and related facilities to be provided based on an inventory and analysis of demographic, geographic, social, and economic data; its success depends on the participation of local authorities. Because it assures the equitable and efficient distribution of resources across the country, its benefits are national as well as local.

Policies for expanding an education system equitably can be implemented efficiently through school location planning. Locations for new schools, for example, may be selected on the basis of basic educational need: that is, for the most rapid stimulation of interest and participation in education among populations that have scarcely been touched by development. Staff housing and boarding facilities can be combined with schools in disadvantaged areas. Construction policies can also significantly affect the ability of a country to expand educational facilities rapidly. For example, while minimum standards should be met and maintenance costs considered, the advantage of cheaper school designs that are also replicable must not be ignored. A country wishing to expand enrollment quickly may construct a "first generation" of "short-life" replicable schools, followed later by a second generation with better construction standards.

Improving the Internal Efficiency of Education Systems

Improving the internal efficiency of an education system involves releasing human and financial resources to expand education opportunities and improve the quality of education services. This topic is discussed more fully in Chapter 4.

Increasing the Demand for Education

In areas which manifest antipathy to schooling, it may be necessary to introduce special measures to ensure that the educational services provided are appropriate to the society concerned. These measures include scheduling primary school sessions in rural areas to accommodate agricultural calendars, segregating middle schools by sex in some areas and replacing them with coeducational schools in others, subsidizing learning materials in poor regions, and providing midday meals. There is growing conviction and evidence that the most effective means to reach youths out of school is through approaches that combine education and training with continuing activities of adults, such as farming, health care, crafts, family planning, homemaking, and even civic duties. In some instances, a broad, integrated rural or urban development approach may be used, but all strands of activity need not be dealt with in a single project; this may be risky. Because most adults in developing countries are preoccupied with the demands of living—or perhaps of merely surviving—only learning that contributes directly to improved living will generate consistent, effective demand.

In situations in which extra inducements, investments, or recurrent financing are needed to create or increase demand, a trade-off between equity and efficiency will have to be faced squarely. As long as there is assurance that new student spaces provided will be matched by a proportional increase in enrollment, the goals of equity and efficiency can normally be balanced by school location planning techniques. But in the absence of such an assurance, the question arises whether limited resources should be invested in "risk" areas where unit costs are high, when the same investment in other areas can create, say, twice as many new places for an equally needy group that will use the added resources fully. It is important, therefore, to understand, before investing, what determines the demand for education in order to be able to predict the degree of potential use of a given educational service. Clearly, mechanisms should be developed to identify and analyze needs as perceived by "consumers" of educational "supply" and channels of communication should be established to feed such information into the planning process at the regional and central levels for effective implementation. The analysis can be done by using local resources, such as community organizations, village and neighborhood social workers, and nongovernmental groups.

Equalizing Quality in the Provision of School Input

Equal access to educational facilities does not necessarily ensure equal use of those resources among population groups. Once student places have been provided, it is necessary to determine which factors facilitate the achievement of specific kinds of learning outcomes and whether these factors are distributed equitably. It is known that school factors—curriculum, instruction, teachers, instructional materials, physical facilities—explain part of the variance in learning output. But this relationship is also influenced by factors outside the school, such as the family background of the student, early childhood experiences, and nutrition. Education inputs, then, should be distributed equally among schools, and the quality of teachers, teaching, and instructional materials must also be equalized. If disadvantaged children are to profit from the education opportunities to which they have gained equal access, they should be provided with additional compensatory educational and social experiences to compensate for their deficiencies. Such efforts should, however, be extended widely only after having been proven at a pilot level. Wherever possible, education opportunities should be combined with prospects of social and economic advancement. This will provide the motivation needed to make full use of the educational experience.

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The measures described earlier should be viewed as components of a comprehensive plan for equitable and efficient distribution of all inputs into the education system—not only school buildings, but also teachers, learning materials, equipment, and so on. While providing basic education, the relative concern for access, equity, and efficiency is a function of the level of educational development. When enrollment rates are low (less than 30 percent), the primary concern—though not the only one—is to increase access to the system by having more schools enroll more students. As enrollment rates grow to more than 70 percent to 80 percent, the main concern then must be to maximize the internal efficiency of the system and to ensure equality in the distribution of resources. Efforts to provide a more equitable access to education, however, should not diminish, because the last 5 percent to 10 percent of students remaining to be enrolled will be the most difficult to serve and will probably require special measures. Beyond the basic education level, developing countries are not expected to reach full participation rates. The main concern, therefore, is not access for all, but rather efficiency, both internal and external, quality of schooling, and availability of education opportunities without distinction of sex, ethnic background, or social and economic status of the student.

The success of these strategies will be determined, to a large extent, by the degree of political commitment of central and local authorities to the dual goals of achieving universal basic education and equalizing further education opportunities. Success will also depend on their willingness to deal with various interest groups for whom the cost of an increase in education opportunities would be a sacrifice of status, power, or comparative advantage. Without sufficient commitment and political skill in bringing the interested parties to accept the changes innovative and promising new policies and programs will not be fully implemented.

Chapter 4: Internal Efficiency of Education Systems

Nature and Scope of the Issue

The problem of educational efficiency has two internal dimensions: the flow of students through the system with a minimum of waste and the quality of learning achieved in the system. Wastage in the flow of students is manifested quantitatively in the form of dropout and repetition, while the quality of learning is determined by the inputs and outputs of the education system.

With regard to dropouts, Unesco statistics indicate some improvement in the survival rates—the percentage of pupils enrolled in the first grade who reach subsequent grades—for the 1965 and 1970 cohorts of school children. For 54 developing countries as a group, about 50 percent of the 1970 cohort did not reach the fourth grade; in low-income countries, only 37 percent of the cohort reached the fifth grade, the point at which Unesco assumes that permanent literacy may have been achieved (see Figure 2; for survival rates by country, see Annex 10). "Thus," concluded Unesco, "the problem of dropouts has lost none of its gravity in developing countries."

Waste is the result not only of dropping out of school, but also of high rates of repetition, estimated to be 15 percent to 20 percent in primary education. Such figures indicate that the number of children admitted to primary school could have been increased about 10 percent to 15 percent with no increase in cost had repetition remained minimal (see Annexes 5 and 9).

Table 1 uses the dropout and repeater rates of 54 developing countries to establish an input/output ratio at the primary level for 1970 to 1975. This indicator represents a ratio of pupil-years spent per completer to the normal or prescribed duration of the cycle. Because there is a rough correspondence between the per capita in-

Table 1

Student Input/Output Ratios of 54 Developing Countries, 1970-75

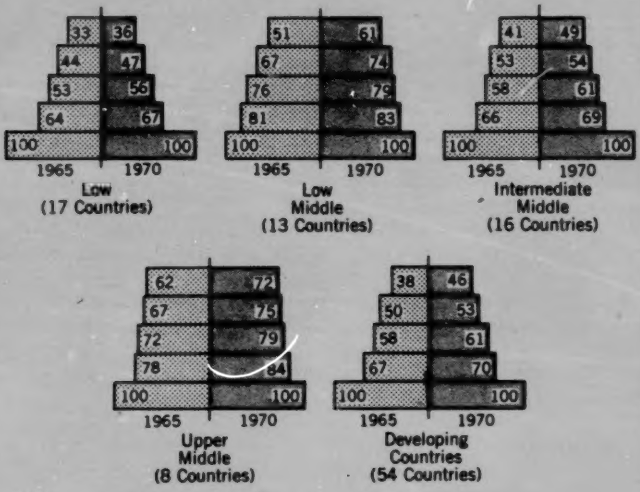
Income group[a]	Number of countries	Median	High	Low
Low	17	1.98	5.16 (Burundi)	1.20 (Kenya)
Lower middle	13	1.67	2.03 (Thailand)	1.14 (Jordan)
Intermediate middle	16	1.48	2.50 (Dominican Republic)	1.03 (Korea)
Upper middle	8	1.30	2.38 (Gabon)	1.12 (Singapore)
Total	54	1.65	5.16	1.03

[a] For definition of groups of countries, see Annex 1.

Source: Data from the Unesco Office of Statistics compiled at the World Bank. *Development of School Enrollment: World and Regional Statistical Trends and Projections 1960-2000* (Paris, July 1977)

Figure 2

Survival Rates in Education for the 1965 and 1970 Cohorts by Income Groups[1]



Source: Same as Table 1.

[1] For definition of groups of countries, see Annex 1.

come of a country and the efficiency of its education systems, countries are grouped by GNP per capita. As the last two columns indicate, however, there is a wide range between the highest and lowest in each group. With few exceptions, the poorest countries pay most dearly for inefficiency.

Repetition and dropout have a regressive effect on equity in an education system. Economic profiles of dropouts and repeaters show that these phenomena are most common among students from low socioeconomic background. Significantly, dropouts and repeaters are more prevalent in rural than in urban areas, and more prevalent among females than among males. The problem of wastage in these areas was studied in 1970 by Unesco and the International Bureau of Education and again in 1979 by these agencies and the World Bank.

Inefficiencies in student flow are often accompanied by inefficient use of scarce teachers and student space. There are, however, many other factors that influence the ratio of students to teachers, such as the size of classes, the load—that is, the weekly contact hours—of teachers, and the weekly class periods. Between 1960 and 1975, the ratio of students to teachers generally increased in secondary and higher education, but decreased slightly in primary education; there were, however, wide ranges of variation among countries (see Annex 6). For instance, the average number of students per primary-school teacher ranges from 19 to 69 and per secondary-school teacher from nine to 39. Likewise, there is wastage in the use of space when physical facilities are assigned to classes that are smaller than the planned norms, or when facilities are used only part of the time during which a school can be opened.

The second aspect of efficiency, the quality of learning and its trade-offs with the quantitative aspects, is more controversial and uncertain. It is necessary, therefore, to define the issues carefully. First, a clear distinction of input, output, and outcome must be made. Input, often the indicator of educational quality, includes factors such as the size of class, qualifications of teachers, material facilities (both software and hardware), and years of schooling. Output, in contrast, refers to the learning achieved—knowledge, skills, behavior, and attitudes—whether measured by tests, by diplomas, or in some other way. Outcome refers to the external effects of output—that is, the ability of people to be socially and economically productive.

Second, the components of efficiency must be measured with a certain degree of reliability and the results properly interpreted, particularly in comparative studies among countries.

Third, it is necessary to establish a relationship between the quality of learning and various education inputs to determine what input produces optimal learning. International comparative studies have consistently pointed up the low quality of both education input and education output in developing countries compared with developed countries. For example, a study of student achievement in science, carried out in 19 countries by the International Association for the Evaluation of Educational Achievement (IEA), indicated that although much the same science materials were covered in various countries by the end of the secondary cycle, the mean score in each developing country was far below the mean score in all the developed countries.

Efficiency in Learning

Three conclusions can be drawn from recent studies that focus on the importance of education input in determining output and outcome.

1. Both out-of-school variables—education of parents, socioeconomic status, child-rearing patterns, nutrition, health care, and preschool education—and school variables, such as teachers and textbooks, influence learning.

2. The influence of school variables on the performance of students is greater in developing countries than in the developed countries. In fact, school variables taken together sometimes explain,

more than social background does, the variation in the achievement of students.

3. Positive effects of school input are frequently greater on children from lower socioeconomic background than from higher socioeconomic background.

Improving the efficiency in learning, therefore, implies improving the quality of school input—curriculum, style of teaching, qualifications of teachers, instructional materials, and use of mass media—and upgrading background factors, such as health, nutrition, and preschool education.

Curriculum and Teaching Styles

Curriculum development has usually been considered a principal element of educational reform and a primary method of resolving educational problems. Its effect on education output, however, has failed to meet expectations. Some of the reasons for this failure are well known. Curriculum development has too long been confused with revision of syllabi and updating the outline of topics. Because curricular innovations are frequently misunderstood by "consumers" of the education system, they are either resisted, ignored, or mispresented. Changes in curricula in developing countries are simply applications of experiences in curriculum development in Europe and North America. The transition of curriculum projects from a pilot level to their adoption nationwide is often made without providing for the necessary complementarities, such as teachers, textbooks, and physical resources. Many projects also do not include monitoring and evaluation procedures to enable necessary revisions to be made.

Curriculum development involves an assessment of educational objectives concerning output and outcome, sophisticated analysis and organization of content, and the design and preparation of corresponding textbooks, instructional materials, training courses, and educational facilities. Although curriculum development is a matter for the country to decide, the following general principles may be applied. First, the content of curriculum should reflect the structure of knowledge—that is, the principal concepts, relations, and theories of various disciplines. Second, it should incorporate the dynamics of the generation of knowledge, such as observation, measurement, classification, induction, deduction, verification, and appreciation. Third, the level of presentation should match the stage of development of the learner. Finally, a curriculum should draw on the environment of the learner for the demonstration and application of its content. Different curricula for different settings should be avoided, otherwise, population groups may have unequal opportunities to advance to higher levels of education.

Curriculum reform also implies improvements in the processes of teaching and learning, such as emphasis on discovery, science, practical activities, and experimentation. Although theories of cognition and learning have not been developed sufficiently in psychology to yield a pedagogical framework for curriculum development, certain tentative guidelines can be suggested. A balance between theory and practice should be maintained. Interaction with physical objects is necessary for learners at the concrete stage of mental development. It also stimulates curiosity and provides motivation. At the same time, to assimilate information derived from concrete experiences, a learner needs a conceptual structure and a means of communication to interpret the information. Because the discovery method is not a necessary condition of meaningful learning, other methods, such as teaching, can be meaningful as well. Studies have consistently shown that the expository method is just as effective in imparting knowledge as the discovery method, although, the discovery method seems to be more useful in the development of higher cognitive abilities, such as logical reasoning and creative thinking. Since learning is a continuous process, it is more realistic to organize a curriculum in small units approaching a continuum rather than in school years. This process leads to experimentation with the concept of nongraded curriculum. Finally, the attainment of a certain level of achievement proceeds at a different pace for different types of learners and under different teaching conditions. Organizing the work of students according to their rates of learning is a worthwhile way of teaching them.

Effectiveness of Teachers

International reviews of studies dealing with the effectiveness of teachers, including one commissioned by the World Bank, indicate that selection and training of teachers are important means of improving the performance in learning. The following trends can be discerned. First, personality traits—emotional stability, extroversion, and dependability—are positively related to teaching skills and the achievement of pupils. Women teachers are often better satisfied with their profession than are their male counterparts, but the effectiveness of male teachers compared with female teachers depends on the grade and the subject taught. Second, there is little evidence to be drawn from the achievement of students to support the assumption that there is advantage in recruiting a teacher from a similar socioeconomic background as that of the pupils. Third, qualifications of teachers—certification, credentials, educational attainment, and knowledge—tend to affect their behavior positively, but policies to improve the qualifications of teachers indefinitely go unsupported. In some countries, moreover, the training of teachers has not had a positive effect on the achievement of students. Rather than adding a university degree, or substituting it for a professional one, it is more important to improve methods of training and selection and to develop a teacher's knowledge and skills in specific subject areas. General methods and techniques, such as microteaching,[1] encouraging trainees to rate their own performance, enabling trainees to observe and participate in actual classroom situations, are effective in promoting desired changes in the behavior of teachers. Fourth, positive expectations of teachers from students are important to successful performance by students. Finally, in-service training makes teachers more effective in their jobs, particularly after a few years of experience in teaching.

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[1] Microteaching is a format used in training teachers in which the trainee teaches a small group of pupils for five to ten minutes to practice *one* teaching skill or method. The lesson is usually videorecorded and critiqued by the trainee, his supervisor, and sometimes his peers, and used as a basis for replanning and repractice of the same skill until it is mastered.

Despite the known effects of teachers on educational efficiency, most developing countries keep a high percentage of unqualified teachers, and have poorly designed and equipped teacher-training programs and *ad hoc* in-service training programs. Solutions to these problems are complex. They require training facilities to be expanded, in-service training to be systematized on a continuing basis, the quality of training programs to be improved by incorporating methods and techniques of selection and teaching that have proved effective and by relating training to specific skills and favorable attitudes, and by providing resources to assist the teacher in improving the quality of teaching. The resources may include guides for teachers, advisory services, radio and television programs, bulletins, correspondence courses, and resource centers for teachers.

Instructional Materials

Governments can put more efforts and resources into the design, production, and distribution of learning materials, including equipment and printed matter. Results from the Philippines indicate that after the first year, learning in the first grade increased 12 percent on tests in mathematics, science, and language after sufficient investments were made to alter the ratio of pupils to book from 10:1 to 2:1. In fact, the availability of textbooks has been found to be the most consistently positive determinant of academic achievement. Yet, next to providing trained teachers, textbooks remain the most costly item required for a minimal standard of education. It is not surprising, therefore, that the provision of textbooks has been inadequate in low-income countries, and in many rural areas, is nonexistent.

A number of educational conditions make for an efficient program in producing instructional materials: consensus on curricula and syllabi; expertise in the design, preparation, and evaluation of materials; and training of teachers in the use of these materials. Other factors, such as marketing surveys and policy, printing and production capability, paper supplies, and organization of distribution are also important.

Mass Media and Distance Learning[2]

The use of mass media, particularly radio, increased in the late 1970s. Evaluation of costs and results indicates that the media have

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[2] "Distance learning" is a technique in which technology, such as radio, television, and correspondence, combines with textbooks and occasional personal contacts to replace both the teacher and the school.

Table 2

Uses of Radio in Formal Education

Strategy	Objectives		
	Improve access	Improve quality	Reduce cost
In-school enrichment provides occasional lessons beyond the ability of teacher to provide.	No	Maybe	No
In-school direct instruction provides most of the instruction in one or several subjects.	No	Yes	Usually no
Extended schooling provides enough instruction that a qualified teacher may be replaced by a monitor.	Maybe	Maybe	Maybe
Distance learning in which technology (radio, correspondence) combines with textbooks and occasional personal contacts to replace both teacher and school.	Yes	Usually no	Yes

Source: Dean T. Jamison and Emile G. McAnany. Radio for Education and Development (Beverly Hills, California and London: Sage Publications, 1978), p. 134.

potential for fulfilling three objectives. First, educational broadcasting improves educational efficiency by improving the quality of instruction in traditional subjects, by providing instruction in subjects for which qualified teachers are not available, by supplementing curriculum reform, and by reducing repetition among slow learners. The teaching of mathematics by radio in Nicaragua, for example, contributed to a reduction in the rate of repetition. Second, mass media, usually in combination with printed materials, can provide distance learning to persons unable to attend classes. Such projects are under way in the Dominican Republic, Kenya, Republic of Korea, Mauritius, and numerous other countries. Third, the use of mass media can reduce education costs, if the number of users reaches a given minimum level.

Four strategies for the pursuit of these objectives have been considered and are listed in Table 2. The results vary according to the strategy defined. If radio projects are properly designed and supported, they can have a high potential for improving efficiency. Further development of the technology of communication satellites and sources of power for receivers will undoubtedly increase the potential of television as an educational tool. For most countries, however, television will not be the preferred medium because of the high costs of capital, maintenance, and operation.

Remedying Preschool Factors

The effectiveness of school input, as pointed out earlier, is significantly dependent on the characteristics of entering children. There is growing evidence that children of preschool age from poorer segments of the population in developing countries perform poorly in most tests of ability compared with children from higher-income groups. As elementary schools expand and become more equitable, drawing an increasing number of children from lower-income families, they will face an increasing deterioration of the "raw input" entering the system. It is important, therefore, to identify the critical factors determining the abilities of preschool children that can be influenced by policy instruments usually available to governments. There are indications in the literature that the most critical factors in this category are nutrition, health, and early social environment.

The first factor, malnutrition, adversely affects the mental performance and psychomotor activity of a large proportion of children in developing countries. Studies have shown that serious nutritional deficiencies in early childhood impair normal growth and function of the brain; that moderate deficiencies of nutrition affect learning capacity; and that malnutrition may most profoundly influence behavior through dysfunctional changes in attention, responsiveness, motivation, and emotion.

Second, children from impoverished socioeconomic backgrounds are most seriously handicapped by poor health; they are plagued by intestinal parasitic and infectious diarrheal diseases, airborne diseases, and the like. Because poor health affects a child's responsiveness to his environment, it also affects his cognitive development.

Third, early social environment affects the cognitive, affective, and interpersonal development of a child. One study shows, for example, that a child's experience with his adult caretaker during the first two years has a significant effect on his motivation, expectancy of success, and cognitive abilities during school years. Understandably, these three factors are interrelated. Just as malnutrition increases susceptibility to disease, a disease can contribute to malnutrition. Similarly, undernutrition and poor health can lead to apathy in a child, which, in turn, may make the adult less responsive to him, reducing adult-child interaction. These problems are compounded, moreover, by rapid growth of the population. Large families and close spacing of births frequently preclude the provision of sufficient food, health care, and attention for children.

Improvement of the preschool environment largely depends on wider measures to alleviate socioeconomic deprivation and to provide nutritionally adequate food, better water supply, sanitation and housing, and preventive and curative health services. There are, however, certain educational measures that can change the quality or the mix of the environments at home and outside that the child is exposed to during his preschool years. First, the environment at home can be altered through improvements in health, nutrition, child rearing, and population education in both adult education programs and the curricula of primary and secondary schools, and the provision of general extension workers at the village level to provide training for parents in health, nutrition, and family life. Second, the environment outside the child's home can be made more conducive by providing preschool compensatory programs, day-care centers, or similar community arrangements on a large scale. Only countries approaching universal primary education can afford to consider, within the wide array of their educational needs and priorities, a vertical expansion of their primary cycle to include one or two years of formal preschool education.

Because poor health and inadequate diet may be features of the entire period of childhood, which includes the school years, efforts to improve health and nutrition should be extended to primary schools. Because of their communal nature, moreover, primary schools may present one of the most efficient channels for providing nutritional supplements and for taking preventive measures against common diseases.

Quantitative Efficiency

This paper, so far, has dealt with a number of inputs through which the quality of learning can be improved. There remain a number of policy choices that should be considered for improving quantitative efficiency. Essentially managerial in nature, these policies would be implemented through administrative action rather than through significant investment of capital.

Flow of Students

Efficiency in the flow of students—the input/output ratio—can be improved by reducing rates of repetition and dropout. First, promotion policies must be carefully examined so that when rates of repetition are unreasonably high, they can be reduced, particularly in the early grades, either by controlling the entry at each level, or by modifying the standards for promotion to reflect the abilities of the pupils. A review of research on various promotion practices provides no evidence that repetition is more effective than promotion, or that repetition practices improve either academic standards or homogeneity of classes. Rather, repetition has a negative effect on a pupil's attitudes and his view of himself. Second, repeaters may be grouped in special programs with appropriate curricula, instructional materials, and methods. Third, because the real issue is not promotion but prevention of failure, the ultimate solution lies in improving the school environment to reduce both repetition and dropout. Fourth, the causes of dropout must be identified and steps for improving the demand for education and for strengthening the holding power of the school need to be implemented. Such strategies were outlined in Chapter 3.

Student/Teacher Ratio

Because teachers' salaries constitute 80 percent to 90 percent (sometimes even higher) of recurrent educational expenditure, student/teacher ratios must be maintained as near the acceptable norms as possible. In some countries, the average load of a teacher is so light that it can be increased without adversely influencing his effectiveness. The size of the class, however, remains the most important variable. A Chilean study based on actual budget data shows that an increase of 15 percent in average size of the class would produce a reduction of 5 percent in the annual education budget, contributing significantly to the cost of a major educational reform. Within certain limits, an increase in the size of the class does not imply a deterioration in the quality of education.

A review by World Bank staff of pertinent literature and research findings challenged the notion that a decrease in class size implies improvement in educational quality. In fact, some studies have associated larger classes with better performance by students. Similarly, a decrease in the size of the class does not guarantee an improvement in the social environment of learning. Despite evidence to suggest that very small classes (15 students or fewer) can have an important positive effect on student achievement, variation in the size of the class within a range of 20 to 40 makes little or no difference in average achievement.

Use of Space

The creation of student space for expansion of education involves high capital costs. It is, therefore, important to maximize the use of available facilities before adding new places to serve the same area. In addition to increasing the size of the class to reflect the norms for which facilities were planned, intensive rotation and staggered scheduling of classes will optimize the use of classrooms and facilities, such as laboratories and workshops. In areas of high population density, double shifts can increase the use of facilities and, possibly, improve the effective teacher/student ratio without a commensurate increase in costs. The application of double shifts takes various forms: two sessions a day, attendance on alternate days, and staggered and overlapping school terms to enable three groups to use facilities designed to accommodate two groups. Double shifts, generally, result in fewer hours of class time or an extension of the time spent in a particular grade. This technique can be carried to extremes, as in those countries in which the use of three shifts is widespread. It must be admitted that there may be a loss of efficiency in learning, although recent findings in El Salvador indicate that the performance of students in rural schools with a double session was superior to that in schools with a single session. Double shifts may also affect the child's life inside and outside the school. Second and third shifts, moreover, tend to be viewed as inferior and less formal than the "regular" morning shifts. These and other drawbacks may, however, be offset by the resultant gains in education opportunity. Because of their implications for the design of schools, various ways to improve the use of facilities must be worked out, whenever possible, at the planning stage.

In areas of low population density where pupils within an acceptable range of distance from school are not numerous enough to fill individual classes, student/teacher ratios and the use of space can be significantly improved by structural changes, such as biennial intake, multigrade teaching, and the nuclear-satellite school networks referred to in Chapter 3. In biennial intake, entry into the first grade occurs every other year; thus, in a six-year primary-school system, only three classrooms and three teachers are needed. In multigrade teaching, children of different ages and grades are grouped in one room to be taught by the same teacher. Grouping may involve only two adjacent grades or, in the case of the one-teacher school, all children in all grades. Such a system creates a new teaching environment and may benefit from the use of student monitors to assist the teacher with the younger children.

Of these methods, biennial intake is probably the most widely applicable. A nuclear-satellite system requires considerable administrative control and boarding or transport facilities as well. Despite evidence to suggest that multigrade teaching can be as effective academically as single-grade teaching, its success depends largely on the quality, dedication, and specific training of teachers. Biennial intake requires no such administrative adjustments or additional qualifications of teachers.

Combining Quantitative Efficiency and Efficiency in Learning

Because efficiency implies obtaining maximum output, both in terms of quantity as well as quality, at a minimum cost, it is important to combine techniques for improving the quantitative efficiency and the efficiency in learning into a comprehensive plan. To maximize the flow of students through the system, it is necessary to identify and probe bottlenecks that exist at various points and examine the effects of removing them on costs and the quality of learning. For instance, improvements in rates of repetition and dropout typically require improved and upgraded performance by teachers, better instructional materials, and increased and improved physical plant and equipment. These measures, by themselves, may increase the unit cost per student. But the gain from a reduction in waste should compensate for the increase in unit cost. Techniques for improving quantitative efficiency, therefore, will normally release enough resources to finance improvements in the efficiency in learning. This, in turn, may contribute further to quantitative efficiency. Increasing resources will not, however, automatically improve the quality of learning. The allocation of the same quantity of resources to one type or configuration of education inputs—curricula, teaching styles, teachers, instructional materials, mass media, preschool factors, and so on—will not produce the same result as allocation to another type or configuration. The search for a cost-effective combination of inputs to produce an expected educational attainment at an incremental cost that is comparable to gains from improved efficiency must be conducted for each particular situation.

Chapter 5: Education and Work

Nature and Scope of the Issue

The external efficiency of an education system involves relationships between general and vocational education and between schools and work opportunities—what schools and teachers can be expected to do in preparing for future occupations, and what may be expected from a combination of learning in and out of school. The relationships are intricate and diverse and can be summarized in four categories.

First, to promote economic growth, it is essential to have a trained labor force equipped to handle technical and managerial problems; this presents a more severe problem for developing countries today than it did during the relatively gradual evolution of most of the industrial countries in the past. Not surprisingly, where skilled manpower is lacking, enterprises that could provide opportunities for training also tend to be lacking.

A key concept in the development of expertise is that of skill: determining the number and types of skills required by an economy on the basis of the technologies and techniques actually used in the production process; selecting the cost-effective ways of acquiring these skills among the alternatives that can be offered by the total educational and training system; and ensuring that, once acquired, these skills are properly deployed and used.

Second, there is the problem of unemployment in the modern sector among graduates and others leaving school. The contribution of a development strategy focused exclusively on the modern sector of the economy to this problem was emphasized earlier. According to the Report of the International Labour Organisation to the 1976 World Conference on Employment, the rates of unemployment in developing countries are substantially higher than in developed countries, and unemployment is disproportionately concentrated among the youth, first-time job seekers, and women. Another equally important problem is underemployment, symptomized by low productivity.

Unemployment is likely to worsen in the foreseeable future, as the growth of the labor force of the developing world accelerates from 2 percent a year between 1960 and 1970, to 2.7 percent a year during the next 25 years. Even the optimistic projections indicate that the number of job vacancies will accommodate only a limited proportion of the 15-year-old age cohort in 1980: 25 percent, at the most, in Africa, and between 30 and 50 percent in Latin America and most parts of Asia. Even in the more rapidly developing countries, such as Brazil, Republic of Korea, Malaysia, and Mexico, less than half the age cohort stands a reasonable chance of obtaining employment in the modern sector.

Third, policymakers, employers, as well as individuals tend to consider formal education a passport to jobs in the modern sector. In one recent study, it is suggested that the educational ambitions of young people reflect conditions of the labor market rather than unrealistic career aspirations. To increase their chances for wage employment, therefore, students tend to remain in school as long as possible, sometimes for more years than required by the available jobs. Because of the low private cost of education and the extended family structure, families try to educate the majority of their children, although they may be satisfied if only one of them is employed. Thus, a "qualification syndrome" sets in, which reinforces the natural tendency of education at any level to be a preparation for the next. In many developing countries, educational credentials, occupation, and wages are closely interwoven in the public sector of the economy that is often the predominant sector.

Fourth, the link between education and work includes questions about the formation of attitudes and habits characteristic of productive workers. Social relations and experiences to which workers are exposed, such as the pattern of subordination and hierarchy, labor-management relations, fulfilling work schedules, and sheer physical and mental strain may be significantly different from the social climate of the educational institution.

Ways to improve the relationship between education and work in the modern, informal urban, and rural sectors of the economy, respectively, are discussed in the rest of the chapter. These relationships are intricate and diverse and to generalize about them is difficult. While there is ample experience of them in most parts of the developing world, they need to be systematically analyzed in order to understand what implications they will have on policy. Relationships among the modern, informal urban, and rural sectors vary greatly among countries. In some of the least-developed countries, economic dualism—that is, gaps in organization, technology, monetary practices, output standards, and the like—is so strongly entrenched that the modern and traditional sectors coexist with a minimal effect on each other. In other countries, reduced differences between sectors permit linkages between the modern and more traditional production processes.

External Efficiency of Education in the Modern Sector

The balance between education and work can be enhanced by one or more of the following undertakings: tempering the "inflation" of qualifications, increasing job opportunities, and modifying the supply and nature of education opportunities. The first two undertakings have to do with general economic development, while the third is more strictly related to education.

Among the measures to make educational qualifications more realistic are: reduction in the disparities in wages between the modern and traditional sectors and between clerical and technical jobs; requiring the beneficiary to bear an increasing share of the cost of his education as he advances within the system; relating job specifications to the minimum required education, and wages to job specifications rather than to credentials; and developing effective counseling and placement services in schools and training centers, and better liaison between schools and the labor market. More jobs can also be created by a shift from a highly capital-intensive system of production to a more labor-intensive one, by improving rural infrastructure, or allocating a large proportion of the country's development budget for job-creating activities.

In the domain of education policy, the principal issues that concern education and work center around the kind of education or training that is best suited for a given purpose, and the institutional forms that can most effectively deliver it. This calls for various combinations of formal, nonformal, general, and specialized types of education and training. These combinations cover a wide spectrum, including general education, diversified schools, professional education, on-the-job training, and a combination of education and work.

General Education

There is evidence that education increases the productivity of workers. A study in 20 countries has shown that in all cases, the social rates of return on primary education are significantly positive: 12 percent, or better (see Annex 13). The average social rate of return is significantly higher on primary education (26.2 percent) than on secondary education (13.5 percent) and higher education (11.3 percent). Arguments of economic efficiency, along with arguments of equity, support continued investment in primary education. Some general formal schooling seems to be necessary for further training; it provides skills in communication, mathematics, and science, necessary in a modern economy. Educated workers are more achievement-oriented, more self-reliant, more adaptive to new situations, and, above all, more trainable. To improve the external efficiency of education, therefore, it is necessary to expand and improve efficiency of at least first-level education. At the secondary level, there are wide variations among countries in the present quality, and in their capacity to expand at present unit costs. It will, therefore, be necessary, in some cases, to concentrate on improving the quality, and elsewhere, on expanding secondary education, while reducing unit costs at the same time.

Diversified Education

Many developing countries, in an attempt to adapt the content of secondary education to the expected job needs of those leaving school, have diversified the curriculum by introducing practical or occupational subjects into an otherwise completely academic program. Two models are prevalent. The first model introduces practical subjects—industrial arts, home economics, agriculture—at the lower secondary level to provide prevocational orientation and to develop a positive attitude toward work. The second model includes a general academic stream, plus one or more specialized occupational streams, usually at the upper-secondary level, depending on the economic life of the community.

Diversified schools have been a popular alternative to purely academic schools, but experience, including that of the World Bank, suggests caution. First, diversified curricula, particularly for the second model, are complex and expensive; they require new teachers, new curricula, additional physical resources, and high maintenance costs and skills. In countries such as Peru, where diversified curricula were considered a replacement for conventional secondary schools, the cost was found to be prohibitive. Second, projects of the first model that had unrealistic employment objectives had unsatisfactory outcomes. There has been no consistent empirical indication of changes in the attitude of students toward labor; in the majority of projects, students still preferred academic fields to vocational training. Finally, fitting an occupational curriculum attuned to the needs of a local economy (as in the second model) is a delicate task in which miscalculations may leave expensive facilities underused. Because the amount of specialized work included in the curriculum may be insufficient for the formation of skills, the diversified secondary school is a questionable method for training large numbers in specific vocational skills. But if it is used as a basis for the training of technicians or as preparation for higher education, especially in technical fields, the costs and difficulties of the diversified secondary school are more easily justified. It is, therefore, important to weigh diversification against other priorities for educational investment on the basis of educational objectives and the country's needs. The priority given to this mode of education may not be strong in countries in which enrollments at the secondary level are low and graduates have no difficulty in finding employment. The scarce resources needed for the relatively expensive diversification scheme may, in some cases, contribute more to the development needs of a country if they are diverted to further expansion of general secondary education.

Professional Training

If diversified secondary schools are inappropriate for training middle-level skilled manpower, can technical and vocational schools do any better? Twenty-five years of experience has not resolved the controversy about the formation of skills within the formal system, called by its opponents "the vocational school fallacy." Part of the problem lies in the difficulty of forecasting accurately the requirements for specific skills in the economy. For that reason, full-time pre-employment vocational training should, of necessity, impart general skills. Vocational and technical schools should, therefore, provide to large groups of trainees: pre-employment training in broad categories of skills that can be applied in a variety of work situations, vocational and technical knowledge that prepares graduates for the additional training they may get on the job, and training in skills that requires a good organized knowledge of theory that is best presented formally in a classroom. In view of the limited absorptive capacity of the modern sector in developing countries—and the resultant high unemployment rate, it has been recommended that technical and vocational education should encourage self-employment, individual initiative, and cooperation.[1] In addition, it is often necessary to provide vocational training in specialized skills, when single employers lack the technical expertise to direct training, or find it uneconomical to employ training specialists. In most instances, it is more effective and less costly to offer such training in specially designated centers than in technical and vocational schools. These centers can offer training in a limited number of skilled occupations, with special emphasis on the practical or shop aspects of the work, to persons who have finished their required general schooling.

The viability of the vocational and technical school model for training, within reasonable costs, depends to a large extent, like the rest of the education system, on the degree of its efficiency and quality. Strategies proposed in Chapter 3 apply equally here. There are, however, three particular factors that are indispensable to the effectiveness of technical and vocational schools. First, creating employment depends less on training than on the pace of industrialization. Second, some success depends on the quality of the relationships between schools, employers, and government ministries. The more attention is paid to strengthening these linkages and increasing the involvement of employers, the better are the chances of operating schools effectively, thereby producing more graduates who are employable. Third, instructors with both industrial and academic background are needed.

At the postsecondary level, specific resources and functions important for development need to be built to provide professional cadres, such as technologists, researchers, and managers, and to generate appropriate knowledge for the advancement of the modern sector. To meet the need for qualified technicians and to improve the balance between technicians and professionals, nonuniversity models of higher education, such as polytechnic and community colleges, should be introduced. The advantage of these institutions over universities in achieving these objectives is that they can concentrate on specialized, industry-related fields, provide short terminal programs, relate more directly to the requirements of the economy and of the community, and can easily be extended to cover different parts of the country.

On-the-Job Training

As technical and vocational schools provide training for the general market, specialized training may be provided by an enterprise for its own staff; an example of this is "project-related training" which seeks to provide specialized managerial, technical, or operational skills pertaining to a particular enterprise or sector. Training by enterprise is restricted to specific jobs limited by the future scale of the enterprise, and the number of employees in any one occupational category during a fixed period of time. Because the trainees are also employees, the problem of balancing supply and demand does not arise. Further, there can be significant spillover of this training and experience into other activities.

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[1] Recommendation by the Inter-American Council of Science, Education, and Culture of the Organization of American States (OAS) at its annual meeting in 1978.

Project-related training does not duplicate the training offered in schools or vocational institutions. Rather, the two are complementary. The criteria used for designing a general training system, as well as for testing its success, are the labor market and the education system. The modes of general training are, thus, subject-oriented, operating within the context of the education and training process. Enterprise-related training, in contrast, is job oriented and is governed by the criteria of the production system. The cost effectiveness of each method depends on the economic and institutional circumstances, and on the value of specific skills to the enterprise. Factors, such as rates of unemployment, wages of trainees and their relation to the wages of other employees in the firm, mobility in the labor market, influence of labor unions, the mix of training and overlap with the content of other programs offered, or with the training specified by the firm or agency—combine to offer a calculable basis for choice.

Combination of Education, Training, and Work

Somewhere between these two approaches lie systems combining on-the-job and off-the-job training. They are commonly found in Singapore and in most of the Latin American countries; for example, the National Service for Apprenticeship (SENA) in Colombia, the National Service for Industrial Apprenticeship (SENAI) in Brazil, and the Industrial Training Board (ITB) in Singapore are autonomous bodies financed by a payroll tax. In addition to formal training and instruction, these institutions provide training that combines instruction in the classroom and practice in the workshop of varying duration. Trainees are usually sponsored by industrial firms. Evaluation of these apprenticeship programs shows that, although costs are sometimes high, they are successful in training skilled workers to accepted standards of proficiency.

Many developing countries are moving a step further by incorporating work in the educational process based on the belief that work experience affects education. There is some evidence, for example, that working in a factory has a positive effect on verbal and quantitative achievement, roughly similar to that of formal schooling. Since the social climate for education has a positive effect on learning outcomes, social realities in the world of work need to be reproduced in the school as closely as possible. Attempts to interrelate education and work are fundamental to education policy in socialist countries. Similar attempts have been made, with varying degrees of success, in some other developing countries, such as Benin, Tanzania, and Zambia.

The various methods of training described earlier should not be viewed as strict alternatives, but as complementary inputs into an overall national training program. The issue, then, is not which method is more cost effective, but rather, under what circumstances one type or combination, concurrent and successive, should be chosen over another. The selection of a mode of training ultimately rests on economic and institutional factors. Among economic factors are the cost of training, the urgency with which the skilled workers are needed, and the profitability of training to the enterprise. Institutional factors include the existing training environment and laws, the influence of labor unions and employers' associations, attitudes of employers, and the nature of the labor market. Such policy decisions require a rigorous analysis of economic and institutional factors to compare alternatives, and manpower analysis to obtain general information on the needs for employment, the skills required, and the preferences of employers.

Acquisition of Skills in the Urban, Informal Sector

Although comprehensive statistics do not as yet exist, the urban, informal sector in the developing countries is believed to account for 25 percent to 60 percent of the urban labor force. This sector is characterized by easy entry into the labor force, reliance on indigenous resources, the acquisition of skills outside the formal school system, the prevalence of self-employment and labor-intensive production, the small scale of operations, the unregulated, competitive nature of markets, low profits, and comparatively simple technology.

In most countries, there is no explicit program or policy for dealing with the training needs of the informal sector. In certain countries, moreover, a negative view of the sector will have to be overcome before steps for meeting training needs can be taken. In analyzing these needs, it is convenient to divide the sector, according to its technologies, products, and systems of training, into three subsectors:

1. *The craft subsector.* Each production unit is concerned with one product or line of product that is often made at home by self-employed workers and family helpers, among whom there is a high proportion of female workers. It requires little capital, but needs a high level of traditional manual skills, usually learned on the job over long periods of time. When successful, the enterprise may extend into marketing, requiring new skills in marketing or accounting and usually some formal education.
2. *The workshop subsector.* It covers a variety of activities—production, servicing, and repair—and often responds adequately and cheaply to demand from the modern sector. It utilizes hand tools and simple power machinery and requires rough and ready manual skills in woodwork, metalwork, masonry, and the

like. Ability to learn on the job and adapt to new tasks are important. While older generations acquired these skills for the most part on the job, institutionalized training programs are increasingly being established for the younger generations following primary education in nonformal centers of accelerated vocational training.

3. *The commercial and services subsector.* In many urban areas, this informal subsector represents the most extensive spatially, and the best integrated informal economic activity. For the literate rural dweller, the transition from daily marketing to the permanent status of an urban trader is the first step into the wider field of commerce and services. Capital requirements are small, overhead costs are low, and the profit margin is slim. Although members of this informal subsector have traditionally been known for their natural business acumen and negotiating skills, "entrepreneurs" seeking to extend their skills to a larger scale of economic activity (accounting, inventory, and other standard business training fields) will need flexible urban training programs. Suppliers of credit can provide an invaluable service in the area of small business extension—advice on profitable lines, on how to apply for credit, on analysis of business risks, on capital investment, and so on.

The nature of the sector assumes a strategy for the formation of skills in which on-the-job training is firmly incorporated. As the sector grows, however, institutionalized off-the-job training could become necessary. To relate such training to production, off-the-job training should be coordinated with on-the-job training; learning systems should be based on existing production processes; entry requirements should be coordinated with the characteristics of the eligible population; trainers should be recruited from among the best local workers; and the community should be responsible for organizing and running these training programs.

Efficiency of Education and Training for Rural Development

Rural development is carried out within a policy framework that encompasses a variety of actions on prices, credit, land reform, rural services, local organization, and rural infrastructure. It also encompasses education and training appropriate to these actions. Shortage of trained manpower is a serious obstacle to the large-scale development of rural areas. Three aspects of meeting work needs in rural areas deserve special attention: the place and function of the rural school, meeting the needs of agriculture and farmers for training, and meeting the needs of other job-related skills.

The Rural School

Although it is widely believed that primary school is an inappropriate place to train in practical skills, recent research in low-income countries has shown that general education does improve the productivity of small farmers. A review of 20 studies of the education of farmers and the efficiency of farms indicates that farm productivity increased, on the average, 7.4 percent as a result of farmers having completed four years of school (see Annex 15). Thus, basic education in the rural sector, as in the modern sector, brings measurable economic benefits. The questions remain, however, as to what kind of education or training is most effective, and how the general and specific needs of dispersed rural populations for skills can most economically be met.

Attempts to "ruralize" the primary school curriculum have proved difficult and have often tended to create a dual system of education. By relating the curriculum shared by all primary schools in a country to the rural environment, and by drawing on this environment for demonstration and application of content, rural schools would provide a national learning experience in the form of general knowledge and skills needed by all citizens who participate in the development of the country. Such a curriculum would also respond more fully to rural conditions.

Agricultural programs in secondary schools, set up to prepare prospective farmers, have generally had disappointing results. Because facilities are often inadequate and teachers often lack the experience in improved farming techniques, teaching is too academic, and the associated practical work has minimal value for education or training. In supporting the objectives of agricultural development, agricultural schools should concentrate in the area in which they have a strong comparative advantage—that of teaching the principal concepts, background sciences, and agricultural sciences upon which agricultural technology is based. The continuing improvement of agricultural extension services, and the increasing appreciation of the potential of new technology and practices among rural people should enable schools to concentrate more in their area of best advantage and allow practical training to be achieved in rural communities.

There is, however, a separate need for vocational training in agriculture at the technician's level to supply a wide range of agricultural extension services and agro-industries with properly trained career personnel. Rapid expansion of agricultural and rural development programs in almost all developing countries, together with widespread improvement of agricultural services and available technology in rural areas, have greatly increased the demand for trained agricultural technicians and substantially changed the nature of their jobs. The vocational training institutions that supply these needs will be more effective by maintaining close communication with the employers of their trainees and by retaining familiarity with the job requirements of those trainees. Vocational agricultural schools are able to provide pre-employment training for lower-level staff needed for the agricultural sector. Employing agencies, however, generally need to develop the capability of providing supplementary job-specific training to prepare staff for, and subsequently develop them in, their individual jobs.

There is a need, at the postsecondary level, for institutions to train professional manpower in agriculture and related fields. In the process, the dual function of staffing the upper echelons of public and private agricultural bodies and of generating technical knowledge adapted to local conditions for use by extension services should be served. Finally, nonagricultural training institutions—those that teach medicine, education, public administration, or civil engineering, for example—can frequently introduce a rural orientation into their teaching, thereby providing educational linkages between the rural sector and national life.

Agricultural Extension and the Training of Farmers

Extension services have traditionally been the channel for transmitting new knowledge and skills to farmers. They exist in almost every country, although their effectiveness varies considerably, and common weaknesses are readily identified. These include poor training; unfavorable working and living conditions (referred to earlier); lack of career incentives; and isolation from the farmers they seek to serve, from other complementary services that contribute to rural development, and from the research and information agencies by means of which they should update their technical knowledge. Because middle-level and senior-level extension staff are frequently city bred, they are unable to communicate sensitively with farmers; they also lack the experience in the practical aspects of agricultural production.

Much of the training offered agricultural extension staff has included a preservice, largely theoretical course with almost no subsequent training in specific jobs for those in service. The current emphasis on agricultural development in most developing countries, however, has stimulated rapid change for which appropriate training for specific jobs is now required. Introducing effective training programs entails the establishment of training capability and organizational structure within rural extension services. The "Training and Visit System"[2] which incorporates this principle, has been introduced with initial success in a number of regions. But there is no standard solution to extension problems. In the design of every agricultural extension system, moreover, the social, cultural, economic, and political environment in which it is to operate should be taken into account. If in some cultures and economies a highly specialized, concentrated approach is useful, a multipurpose approach may be required elsewhere—notably in the smaller and poorer countries.

Because the ratio of farm families to available trained extension agents is often unbalanced in the villages, a selective use of the mass media to supplement field services may be highly effective. But first, the administration of mass media must be improved if they are to significantly support rural services.

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[2] See Daniel Benor and James Q. Harrison. *Agricultural Extension: The Training and Visit System* (Washington: World Bank, 1977).

Many countries have experimented with residential farmer training centers to supplement extension advisory services. They have proved particularly valuable in promoting new or specialized agricultural enterprises, in educating rural leaders, and in obtaining their support for rural development programs. At the same time, they have generally been difficult to administer and costly to operate; consequently, many institutions are underused.

Nonagricultural Skills for Rural Development

A great many nonagricultural skills are needed if rural areas are to develop. They include standard artisan skills, home craft and health, village planning, transportation, and storage and marketing. Various modes of delivery are appropriate in these various fields. Although rural schools remain the sole facility for instruction, they are highly underused. Two essential categories of skill prevail in all development initiatives—the category of village organization and mobilization and that of leadership and management. Ways of developing these skills quickly on a large scale are still unidentified. There is some indication, moreover, that villagers with minimal education often lack a grasp of concepts essential to acquiring management skills needed for rapid village development. Incorporating these concepts into adult education programs and rural schools may prove effective.

Chapter 6: Administration and Management of Education Systems

Nature and Scope of the Issue

The unprecedented expansion of education systems during the past 25 years has placed heavy demands on educational administration and management. In addition, the growing concern about making education opportunities available equitably, reducing inefficiencies, and relating education to work has highlighted the importance of planning and research. Despite efforts to cope with these demands, the development of national managerial, administrative, and analytic capacities lags behind the growth in size and complexity of the educational enterprise. Some programs of educational development suffer because of poor management. The issues involved can be categorized in three groups.

Management and Decisionmaking

The problems associated with education and training are often underestimated. First, the ministry of education is often the largest employer in a country, with financial resources it commands usually representing 3 percent to 5 percent or more of the gross national product (GNP). At the macro level, decisions about education policy require an understanding of the relations among population dynamics, education, the economy, and society, and at the micro level, of the learning process. Second, schools and training centers are the basic cells of education. Their success in producing the right kind of knowledge and skills largely depends on the quality of their management. In many countries, the need for well-trained school principals is urgent. Another aspect that is usually not recognized is that administration involves the basic tasks associated with handling payrolls, accounting, and inventories, in distributing teaching materials, in maintaining buildings, and in implementing educational decisions. Third, the distribution of responsibilities for decisionmaking clearly determines the effectiveness of management. Initiatives for education and training are horizontally dispersed among an increasing number of agencies nationally, and within the education administration, responsibilities for decisionmaking are vertically dispersed among the ministry of education, local authorities, community groups, and schools. Fourth, management of education is affected by the prevailing problems, practices, and philosophies of public administration. These problems include political interference in decisionmaking, inefficient bureaucratic procedures, absence of a merit system, low civil service salaries, and a high turnover of staff.

Educational planning

Because education is politically a sensitive subject, every country wishes to decide objectives, priorities, and programs for educational improvement. So, educational planning has become a standard feature of educational administration in most developing countries. But it has not, however, become the management tool it was expected to be. The problems are both technical and institutional. First, educational planning has been confined to setting goals. Insufficient attention has been paid to the means of achieving the goals, such as the development of systematic cost-effectiveness and feasibility studies of alternative methods of training, or viable schemes of achieving universal primary education. Second, too much attention has been devoted to quantitative expansion and too little to change. The difficulty of expressing the quality of education in quantitative terms has, perhaps, led planners to neglect these more difficult problems. Third, educational planning has usually been done by the central government; as a result, planning has often been countrywide, with too little attention given to specific programs aimed to benefit well-defined target groups or geographical areas. Fourth, although the number of educational planners is steadily increasing, many countries suffer from a shortage of qualified personnel. Fifth, educational planning has, in many instances, developed as an isolated activity and has not yet found its place in the mainstream of policymaking. Sixth, the knowledge base for policymaking has been of questionable reliability. Inadequate information on economic, demographic, cultural, and political conditions and constraints, and on the dynamics of the education system as well, has hampered progress. As a result, consensus about objectives and standards is lacking.

Research and Experimentation

Research and experimentation in educational growth and reform have been scanty because the extent and complexity of the knowledge base required for the development of sound educational policies have been underestimated. For example, an international review of research on the effectiveness of teachers found only 31 studies in Sub-Saharan Africa, 58 in the Arab Middle East, and 30 in Latin America, compared with hundreds of studies in Europe and in North America[1]. Most of the research in the developing countries, moreover, is restricted in scope and unrelated to policy largely because the institutional capacity is still inadequate in many countries. Like planning, research is hampered by the lack of qualified personnel and the failure to accept it as an integral part of the policymaking process. Further, research activities are inadequately financed because they are considered expensive. This could be true in the short run, but in the long run they may lead to substantial improvements in the efficiency of the education system.

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The various issues of management, planning, and research described earlier have special significance for rural areas. Local management of schools is usually of a lower quality than management at the national level. In addition, the logistics of administrative communications and of the collection of data for planning and research create more problems. Rural areas suffer the most from inadequate national administrative and analytic capacities. Because of weaknesses in the distribution of responsibilities and decisions, reforms that have benefitted urban centers may not reach the rural areas. The few that do may prove to be irrelevant if planning has been based on poor data collected from rural areas, or are results of meager research done in urban centers, or innovations developed in industrial countries.

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[1] Conducted by the Educational Research Review and Advisory Group of the International Development Research Centre of Canada.

Management, Planning, and Research Capacities

Improving Management Capacity

Although the ministry of education is usually the main sponsor of education and training, a division of functions among other ministries is emerging, at least in training. In some countries, the ministry of labor deals with vocational training, with or without the cooperation of employers; the ministry of health with health and nutrition training; the ministry of agriculture with agricultural training, and so on, while general formal education is managed by the ministry of education. But these functional divisions are never fully complete or satisfactory, nor is the diversification of sponsors balanced by adequate coordination at the top. Although employers or others having sound knowledge of a subject should influence the administration of training, a national learning system should be kept free from excessive fragmentation, parochial viewpoints, and wasteful duplication. Some countries, such as Egypt, Nigeria, and Thailand have established national councils with broad representation to develop educational plans and coordinate education and training with other sectors.

Interest groups have occasionally resisted decentralization in making decisions on education. Teachers and their unions, for instance, prefer to be employed by national rather than local educational authorities to avoid social and political pressures from local communities. Job security and financial rewards are usually greater under national management. And so the bargaining power of teachers with government improves. Parents, too, have recognized countrywide examination systems as the only fair mechanism of selection for access to secondary education. Moreover, central governments, keen to preserve the national character of education, have been unwilling to delegate authority over curricula, syllabi, and textbooks to local authorities or individual schools.

The trend toward centralization is now being challenged on the grounds that ministries of education have become overburdened with daily administration of educational logistics—often at the expense of their policymaking functions—and that in many countries, central authorities have difficulty in identifying and articulating the needs of local communities. The degree of decentralization, however, is constrained by national objectives of unity and equity. In most developing countries, administrative centralization is bound to be maintained in all sectors of society to establish some consensus in the face of divisive local and regional interests. Some districts and local communities, moreover, cannot provide qualified administrators or even assume a share of the financial burden of operating schools. The setting up of institutes for management of education can represent one effort to provide local technical and managerial skills. The financial constraint can be removed either by providing local authorities with taxing power to match their fiscal responsibility, or by transferring to them funds of the central government over which they will have discretionary authority.

Strategies for managing education are closely related to the national management system, and cover organizational structures, style of management and management training. First, educational administration is usually organized at the central level by type of education. This arrangement may encourage unnecessary fragmentation of the system. As the administration of the school system becomes decentralized, it may be appropriate to organize the remaining central responsibilities by function—planning and programs, curricula, teacher training, financing, evaluation, etc.—each of these functions covering the whole education system. Whatever organizational structure is used, the key element must be adequate linkage between functions and levels of education. Local inspectors and school principals could provide the link between the central authority—national or regional—and teachers. In many countries, inspectors and principals perform routine administrative tasks—collection of data, distribution of educational materials, and transfer of teachers—at the expense of their advisory and quality-advancement functions. A redefinition of their tasks could bring about a better balance between the advisory and supervisory functions. Because the content of education is continually reassessed, monitoring curricular innovations is as important as evaluating the performance of teachers. Second, management policy and procedures should be formulated in such a way that educational administrators at various levels become important participants in, rather than dispensers of, decisions. Third, educational personnel at the central and local levels need training in management. Colleges and schools of management that already exist for other sectors could also provide training for education, or else, *ad hoc* courses and apprenticeships could be appropriate.

Improving Planning Capacity

A successful way for building planning capacity goes beyond the creation of a planning unit in the ministry of education. It encompasses all functions related to formulating and implementing educational policy—mechanisms for gathering information, research, curriculum development, training of teachers, and monitoring and feedback systems. In addition, a central cadre of planners and regional and local personnel that provide data and feedback to the planning process must be trained.

Some countries have recently tried to introduce massive educational reforms, while others have made only minor adjustments without asking fundamental social or educational questions about the system. Overall, educational changes have been minimal because plans proposed have been ill conceived, policies have been changed, funds have not been available, or skilled personnel to administer reforms have been in short supply. In most instances, as a World Bank study has shown, failure was largely the result of a lack of understanding of the nature of educational change and its relationship with the socioeconomic environment. An awareness of the factors that influence educational reform would enable planners to assess the feasibility of their proposals and revise the scope of reform accordingly. Small changes often create new opportunities for more change. In the long run, it is the ability to continue introducing specific innovations and changes that matters.

Improving Research Capacity

The components of a research capacity in education, as in other sectors, include trained and motivated personnel, an indigenous literature (manuals, techniques, previous evaluation), a base of general information, institutionalized procedures for collecting, processing, analyzing, storing, and retrieving data—both quantitative and qualitative—a technical support staff, organizational arrangements for conducting research and disseminating results, and adequate funds. The development of this capacity could be nurtured by (a) training efforts to enable promising individuals to acquire the knowledge, skills, and experience needed for high-level research and experimentation, and (b) institutional development efforts to ensure that trained researchers work on educational problems within the network of decisionmaking and policymaking.

An expanded program of educational research and experimentation can contribute to better educational management by clarifying issues, defining objectives, and evaluating experience. While the substantive agenda for such an expanded effort must be determined by the individual country, the international review, exchange, and projection initiated in 1976 by the International Development Research Centre (IDRC) in Ottawa,[2] or the identification of research priorities recently undertaken by the Unesco International Institute for Educational Planning in Paris, may provide a framework for cross-national exchange and cooperation. Educational research should be actively and simultaneously pursued in two broad directions. One concerns education as a social force and the way in which this force interacts with the economy and society during the development process. This category includes the relationships between education and work, income distribution, social mobility, and fertility. The other concerns education as an individual learning process and includes the whole range of problems associated with the determinants of learning, the acquisition, and the retention of skills.

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[2] International Development Research Centre. *Education Research Priorities: A Collective View* (Ottawa: IDRC, 1976).

The same range of research will not, however, be independently conducted in all countries. The existence of common or complementary elements in some problems suggests the need for cooperative efforts. Countries with similar problems can save funds and manpower by sharing training and research efforts through grouping, associations, or institutions. Information-retrieval systems and documentation networks can be made available to, and used by, country researchers to reduce unnecessary duplication of efforts and to learn from accumulated experience. Such regional networks for cooperation in research have been developed in Latin America and West Africa. Similar networks, sponsored by Unesco for the exchange of educational innovations, have been developed in Asia[3], and are being developed in Africa and the Arab states.

Certain research projects can only be undertaken internationally. One of the best examples is the extensive program carried out by the International Association for the Evaluation of Educational Achievement, which studied student achievement in mathematics in 12 countries, science in 19 countries, literature in 10 countries, and reading comprehension in 15 countries. Another example is the international state-of-the-art studies conducted by the Educational Research Review and Advisory Group of the IDRC. Cross-national studies inherently require multinational participation which can be effective only if national research capacities are well developed.

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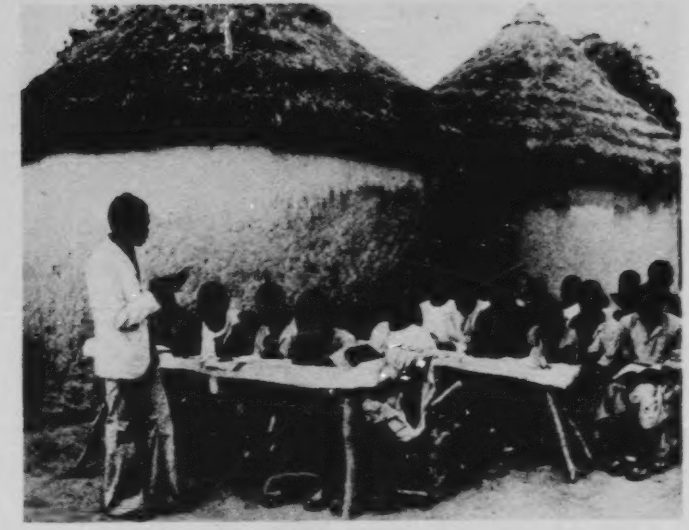
[3] The Asian Program for Educational Innovation and Development (APEID).

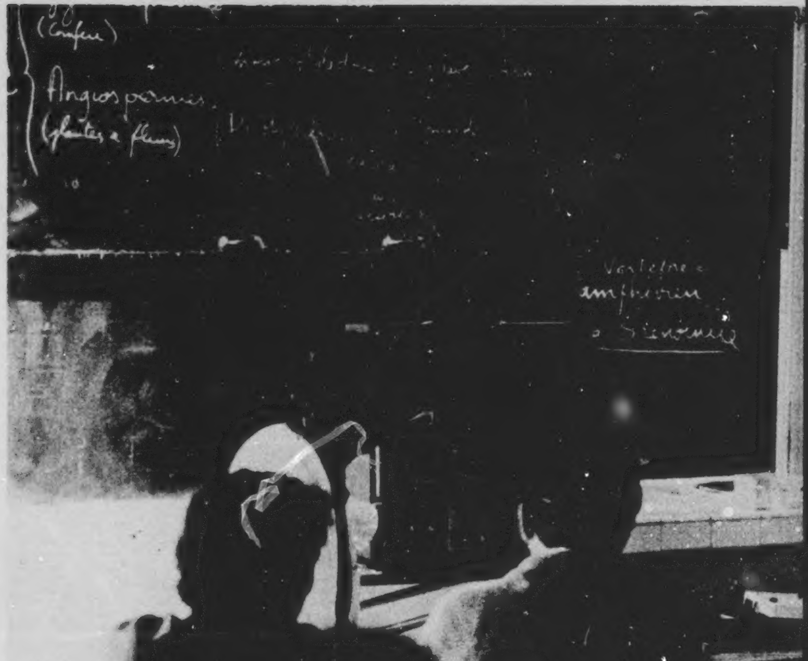
EDUCATION—in pictures

A Bedouin boy immersed in his class work at the El Drad primary school in Egypt. Despite expansion in education facilities in developing countries, one-third of the children of primary-school age are not enrolled in school.



A literacy class is conducted outdoors in a village in the Kita area, Mali. Most governments have accepted the principle that education is as much a basic human need as food, shelter, and clothing.

A social studies class in progress in a Jamaican secondary school. Studies have shown that teachers and textbooks have a greater influence on students in developing countries than in the developed countries.

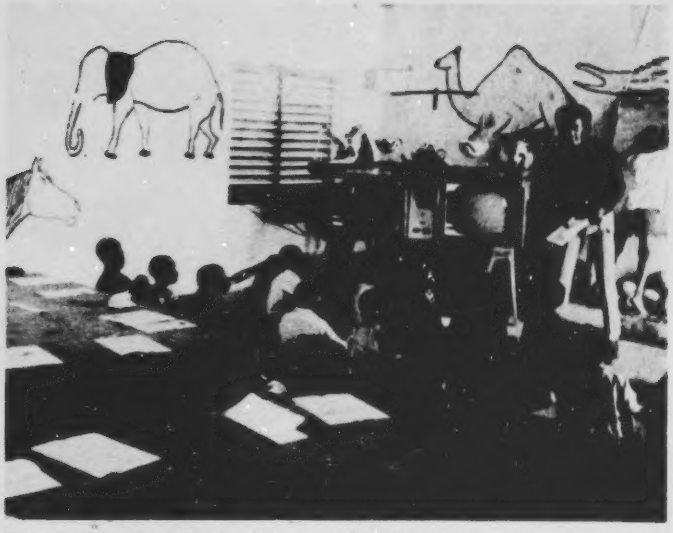

Angiospermes
(plantes à fleurs)

A biology instructor in Morocco explains the dissection of a frog with the help of an audio-visual equipment. Instructional materials can assist teachers in improving the quality of teaching and can enhance the academic achievement of students.

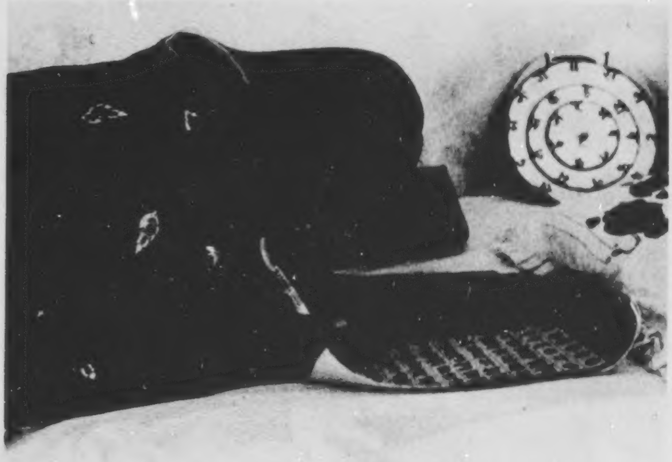
Malaysian students working with hand tools in the metal shop at the Kampong Kerunchi Lower Secondary School in Kuala Lumpur. Many developing countries are incorporating work in the educational process based on the belief that work experience has a positive influence on education.

Trainees watch a demonstration of a small portable rice thresher in the Philippines. There is a need for vocational training in agriculture at the technician's level to supply a wide range of services for agriculture and agro-industries. ⑥

An instructor explains some finer points on the raising of cotton to a group of students near Bobo-Dioulasso, Upper Volta. The World Bank is assisting the government in establishing a nonformal village education system that will provide rural youths with a minimum of practical training to become more productive farmers. ⑦



Television is used for educational purpose in a Niger classroom on an experimental basis. Despite the potential of television as an educational tool, high costs will restrict its use in many developing countries. ❽



A teacher in Nepal prepares instructional materials for use in her arithmetic class. Provision of textbooks and other learning materials have been found to be the most positive determinant of academic achievement. ❾

The Ofafa Jericho secondary school in Nairobi. Funds from the International Development Association have been used to improve Kenya's education system. ⑩

An Indian child works on a problem in an Andean Mission school set up by United Nations agencies to assist in the rehabilitation of indigenous population in Ecuador. Attempts to expand education to unserved population groups must ensure that the services provided are appropriate to the society concerned.

⑪

Chapter 7: Costs and Finance

Nature and Scope of the Issue

Plans for extending education opportunities, improving the quality of education, and building national capacity in management, planning, and research are often hampered by the limited resources devoted to education. The increase in the rate of educational spending, welcomed in the 1960s, is now looked upon with some skepticism, if not opposed. Uncertainties about the social and economic functions of schooling, and doubts about the relevance and external efficiency of the system, contribute to disenchantment with education among certain groups. Moreover, the emergence of new social sectors such as health, population, and nutrition, also militates against the financial priority given previously to education.

Financial resources allocated to education are not restricted to public revenues. They include expenditures of parents on their children's public schooling—for books, clothes, and so on—and contributions from local communities. In some countries, particularly in Latin America, the private education sector, supported by fees and occasionally by supplementary government subsidies, constitutes a substantial portion of spending for education. Because of lack of data, it is difficult to analyze the total outlay for education. In most instances, however, the outlays from public revenues are decisive because of their significance in determining the scope and direction of educational development.

Between 1960 and 1974, average public expenditures of developing countries on education increased steadily as percentages of both GNP and the national budget (see Table 3). The rate of increase as percentage of GNP was higher in developing countries than in developed countries. Although there was an increase in the average expenditures for the developing countries as a group, in many developing countries, there was a decline in the percentage of

Table 3

Public Education Expenditure as a Percentage of GNP and National Budget, 1960-74

	Percent of gross national product (GNP)				Percent of national budget			
	1960	1965	1970	1974	1960	1965	1970	1974
More developed regions	4.0	5.2	5.7	5.7	11.3	15.2	16.1	15.6
Less developed regions	2.3	3.0	3.4	3.9	11.7	13.1	13.8	15.1

Source: Based on data compiled by Unesco.

both GNP and the national budget devoted to education. These averages, moreover, conceal wide variations. Figures compiled by the World Bank, covering the years 1973–75, show that 0.5 percent to 12 percent of GNP, and 3.8 percent to 36 percent of the total public budget were spent on education through government expenditures (see Table 4). However, another cross-country statistical study has shown that among developing countries, there was no relationship between the portion of GNP dedicated to education and GNP per capita.

During the period 1960–73, total student enrollment in the developing countries increased 5.5 percent a year, as did GNP. The proportion of GNP devoted to education, however, grew at an average 1.85 percent a year on account of a variety of conditions. First, the growth of the formal education systems involves a gradual shift within total enrollment, toward higher, more expensive levels of education. Thus, the higher the differences in unit costs—that is, the expenditure per student at each level—the more costly educational expansion becomes (see Figure 3). Second, efforts to raise educational standards and improve the quality of input have a built-in escalating effect on costs. Salaries of teachers and administrators constitute the largest portion of recurrent budgets (sometimes reaching 95 percent of the budget) and are often governed by automatic cost escalators for years of service, added qualifications, and the like.

Table 4

Distribution of Public Expenditures for Education, 1973-75

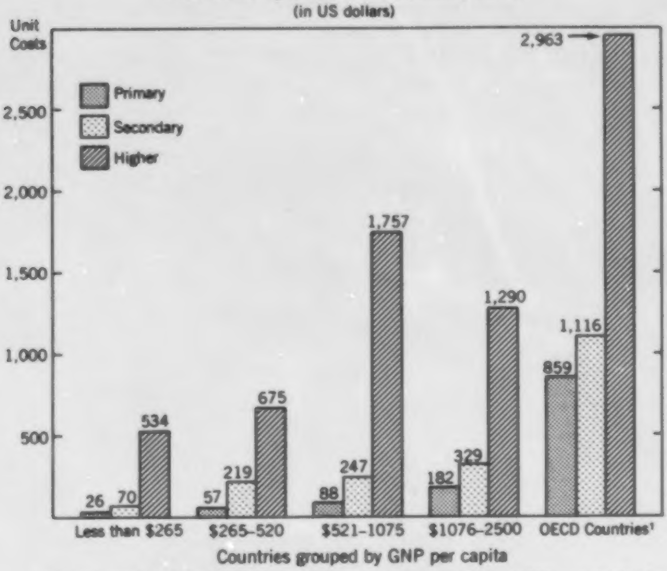
	Percent of GNP devoted to public education	Percent of total public expenditure devoted to education
Number of countries	82	79
Range	0.5-12.0	3.8-36.0
First quartile	5.1	21.0
Median	3.9	16.0
Third quartile	3.0	12.6

Source: Based on data compiled by Unesco.

An examination of unit costs as percentages of GNP per capita may suggest that developing countries have been incurring unit costs that impose an unjustifiable burden on their public finances, especially at the secondary and higher education levels (see Figure 4 on page 70). A comparison of the expenditure per student among countries grouped according to their GNP per capita, however, clearly shows that developing countries are spending much below the level of developed countries (Figure 3), and the patterns of expenditure over time indicate that the differences in unit costs between the poorest and richest countries are widening (see Figure 5 on page 71). Because the largest differences in unit costs are, as

Figure 3

Unit Costs by Level of Education, 1975
(in US dollars)



[1] The members of the Organisation of Economic Co-operation and Development (OECD) comprise Western Europe, Turkey, Canada, the United States, Japan, Australia, and New Zealand.

Source: Based on data compiled by Unesco.

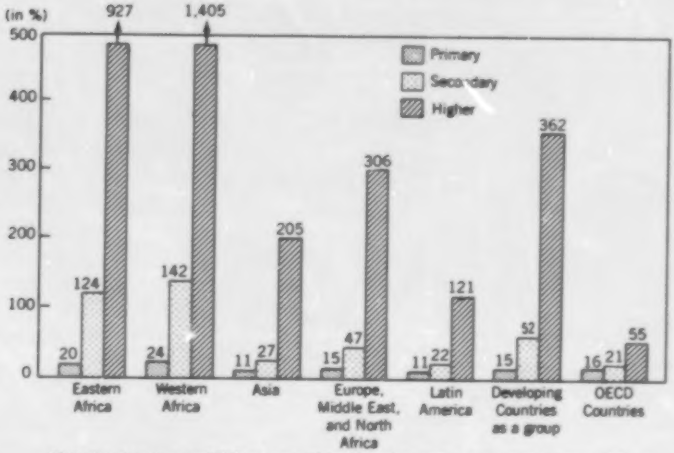
shown in Figure 3, at the primary level, this growing gap cannot be attributed to the gradual shift within total enrollment toward higher and more expensive education. Figure 5 indicates that in the poorest countries there has been a very small increase in public expenditure per student, which, if adjusted for inflation, may represent an actual decline.

About 41 percent of the total expenditure on education in developing countries is on primary education, 27 percent on secondary education, and 32 percent on higher education (see Annex 14). Developing countries spend a larger proportion than developed countries on primary education, a smaller proportion on secondary education, and about the same proportion on higher education. Low-income countries spend a higher percentage on primary education and a lower percentage on higher education than middle-income countries. The variation in the pattern of expenditures among individual countries and groups of countries by income is, however, so wide that no consistent trend can be discerned. For instance, the proportion of expenditure on primary education ranges from 23 percent to 71 percent, that on secondary education from 8 percent to 60 percent, and on higher education from 2 percent to 57 percent.

It is, thus, clear that if education systems continue to grow at the present rate and under the same structural and managerial conditions, they will require funds that—while far below those allocated to education in developed countries—will be beyond the financial capabilities of many developing countries. The financial implications of enrollment by levels of education projected by Unesco for 1985—goals that scarcely provide universal basic education—are that the GNP of developing countries must grow at least 7 percent a year to keep the share of education in GNP at 1975 levels. This is highly unlikely as judged from trends between 1960 and 1975, when the average annual rate of growth of GNP of developing countries was 2.8 percent in low-income countries and 3.4 percent in middle-income countries. The extent to which a country can increase expenditures on education without affecting other priorities will, of course, depend on the sociopolitical conditions of individual countries.

Figure 4

Unit Costs as Percent of GNP Per Capita, 1970–73[1]



[1] A "unit cost as percent of GNP per capita" for a group of countries is the geometric average of the corresponding unit costs as percent of GNP per capita for individual countries in the group.

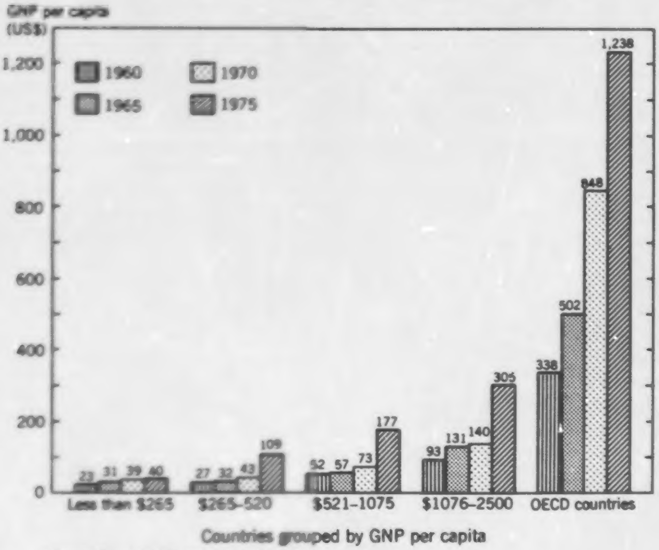
Source: Manuel Zymelman, *Patterns of Educational Expenditures*, Staff Working Paper No. 246 (Washington: World Bank, 1976)

Financing of Education

The increasing demand of education on public finance is not easily resolved. Two possible courses of action are open: finding additional sources of financing and reducing unit costs by improving the efficiency of the education system.

Figure 5

Public Expenditure in Education Per Student, 1960–75



Source: Based on data compiled by Unesco

Finding Additional Resources

The first course of action calls for the tapping of nonbudgetary sources. First, there are several ways by which combinations of work and training can make education more self-reliant financially and shift some of the financial burden to the employer (see Chapter 5). Second, local communities can be mobilized to provide resources, such as land, labor, building materials, and certain consumable materials. Some communities can also contribute to financing the costs of running their schools. Third, a system of fees and loans, balanced by scholarships, can be introduced at the postelementary levels when sociopolitical conditions are favorable. In communities where most people are not wage earners, fees can be collected in kind. Finally, external assistance to education will continually be needed in most of the developing countries for meeting capital expenditures, and in some of the poorest and least-developed countries, for meeting incremental operating costs.

Measures to improve education systems do not always contribute to a reduction in unit costs. For example, some programs for improving the quality of education are costly. In many instances, however, the reduction of wastage in the flow of students and in the use of human and physical resources not only offsets additional costs required for qualitative improvements, but also reduces the overall unit costs of desired outputs substantially (see Chapter 4).

Improving Efficiency

The need to improve efficiency is particularly important at the middle and tertiary levels where rapidly increasing enrollments are accompanied by high unit costs. Possible approaches for increasing efficiency are: improvements in the use of staff by increasing the teaching load and the ratio of students to staff, and by eliminating unnecessary diversity or duplication of courses; using school space more efficiently; introducing accelerated courses of study, year-round programs, and shorter, more intensive training periods; reducing nonteaching costs by improving the student-selection procedures and student-aid policies and lowering costs of boarding; and improving management through effective program budgeting, cost analyses, and procurement practices.

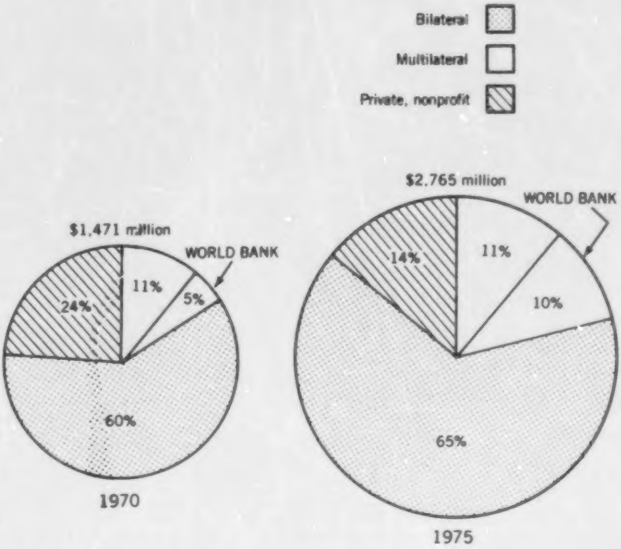
Unit costs as a percentage of GNP per capita for higher education in developing countries are unlikely to reach the lower level of the developed countries because many of the inputs, such as professors' salaries, are affected by international education markets. But even a small percentage decrease in unit costs of secondary and higher education could release additional funds for providing basic education to more people. Moreover, countries that have budgets favoring secondary or higher education disproportionately (see Annex 14) can, with some reallocation, finance a sizable increase in enrollment at the elementary level.

Chapter 8: External Aid to Education

External aid[1] to education in the developing countries expanded gradually during the 1960s and 1970s. Although it amounted to $2.8 billion in 1975, it covered only 9 percent of the total education budget of the developing countries. The World Bank's proportion of aid to education constituted 10 percent of the total aid in 1975, and has continued to increase (see Figure 6).

Figure 6

External Aid To Education, 1970 and 1975



Note: The figures represent commitments valued at donor costs.
Aid from the centrally planned economies is included in bilateral sources and estimated at US$250 million in 1975.

Source: H. M. Phillips, *Educational Cooperation Between Developed and Developing Countries* (New York: The Rockefeller Foundation, January 1977).

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[1] The word "aid" as used in this paper includes grants, gifts, loans, and credits.

Sources and Flow of Aid to Education

Aid to education is a small fraction of total aid to developing countries. It covers 12 percent of the official aid from members of the Organization of Economic Co-operation and Development (OECD)[2], a percentage that remained approximately the same from 1970 through 1975. This proportion represents the average between countries, such as Japan and the United States, which allocate less than 3 percent of their aid to education, and countries such as Norway, which allocates 28 percent, and France, which allocates 34 percent. In addition, loans and credits for education and training have recently constituted 5 percent to 6 percent of all World Bank lending to developing countries.

Between 1970 and 1975, external aid for education and training grew 13 percent a year in current prices. The shares of total assistance from both bilateral and multilateral sources increased, whereas the share of private, nonprofit agencies decreased. Unfortunately, most of the observed increase was offset by inflation. The actual amount of aid provided by agencies that specialize in technical assistance may have declined in real terms as the cost of expatriate personnel, in particular, increased.

Among multilateral agencies, Unesco ranks sixth in terms of its regular budget allocated for education (about $20 million in 1975), but it exercises a much bigger normative role—for several reasons. First, other UN agencies that are heavily involved in aid to education—UNDP, World Bank, UNICEF—use Unesco as a source of expertise and/or as an executing agency. Second, Unesco serves as the executing agency for funds-in-trust ($4 million in 1975) provided by individual donor governments, nongovernmental organizations, or private firms. Third, Unesco advises member countries not only on specific issues, but also on the whole range of the formulation and implementation of education policy. Finally, Unesco's secretariat provides a forum for the exchange of experiences and innovations among experts from member states and a channel for the dissemination of ideas to high-level decisionmakers.

Purpose of Aid to Education

About 80 percent of the aid to education from bilateral sources and from most specialized agencies of the United Nations goes for technical assistance—teachers, experts, advisers, and fellowships for students and trainees—whereas the development banks have been the main providers of physical facilities and equipment. The private, nonprofit agencies have concentrated on institutional development, on educational innovation, and on reform.

Within these categories, certain trends emerge. For instance, the number of persons financed under OECD/DAC[3] bilateral assistance

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[2] The members of the OECD comprise Western Europe, Turkey, Japan, the United States, Canada, Australia and New Zezland.

[3] The Development Assistance Committee (DAC) comprises 17 member countries of the OECD, in addition to the Commission of the European Communities.

Table 5

OECD/DAC Countries' Official Bilateral Aid in Form of Technical Assistance, 1969 and 1975*

Type of technical assistance	Number of persons	
	1969	1975
Teachers	59,400	35,700
Educational advisers and experts	6,700	2,400
Students assisted	39,700	43,700
Trainees assisted	33,300	34,600

*The Development Assistance Committee (DAC) comprises 17 member countries of the Organisation for Economic Co-operation and Development (OECD), in addition to the Commission of the European Communities.

Source: H. M. Phillips, **Educational Cooperation between Developed and Developing Countries** (New York: The Rockefeller Foundation, January 1977).

fell 16 percent between 1969 and 1975, reflecting higher costs and, possibly, misgivings about technical assistance. The growing number of trained persons in the developing countries may have also reduced the need for technical assistance. The decrease in the number of advisers and teachers is partially offset by the increase in the number of students and trainees (see Table 5).

Although no comprehensive statistics exist on the distribution of total educational aid by level of education, it is estimated that as much as 80 percent of the aid has been allocated to the support of secondary and higher education, whereas relatively little has gone to primary and out-of-school education. For instance, on a bilateral basis about half the teachers, experts, and advisers from OECD donor countries in 1975 assisted general secondary education, and a third, technical and postsecondary education. Nearly 80 percent of the fellowships went to students in technical schools and universities. Aid from centrally planned economies went primarily for industrial and vocational education and training, as did aid from multilateral and private donors.

Until the early 1970s, many agencies providing aid gave priority assistance to upper levels of education systems reflecting the perceived role of education as providing the economy with skilled manpower. The United Nations Children's Fund (UNICEF), however, was an exception; for many years it gave 60 percent of its funds meant for education to primary education. During the early 1970s, a shift in policy took place among donors as a result of profound changes in the perception of the development process. In its 1972 policy paper, for example, the Swedish International Development Authority (SIDA) established new priorities, including nonformal education, elementary education, and vocational and agricultural training, as well as the training of teachers and administrators within these fields.

Geographical Distribution of Aid to Education

Comprehensive data on the geographical distribution of aid for education are available only for donors who are members of the OECD, and the two principal international development banks which together were responsible for 80 percent of the total aid for education in 1975 (see Table 6). The share of bilateral aid for education allocated to sub-Saharan Africa and Asia has risen, whereas the share of North Africa and the Middle East declined as a result of the redeployment of French technical assistance. In Latin America, the share of bilateral aid from OECD countries declined, in part, because of the decreasing reliance on technical assistance from expatriates.

Table 6

Geographical Distribution of Aid From OECD/DAC and Development Banks, 1969-76

	OECD/DAC		Development Banks[a]	
	Percentage distribution based on technical assistance, personnel, and fellowships for students and trainees		Percentage distribution based on U.S. dollar value of loans and credits approved during the year	
	1969	1975	1969-71	1974-76
Africa, South of Sahara	31	35	28	22
North Africa and Middle East	32	26	18	22
Asia and Oceania	21	26	14	19
Latin America and Caribbean	16	13	40	37
Total	100	100	100	100

[a] World Bank and Inter-American Development Bank

Source: H. M. Phillips, **Education Cooperation between Developed and Developing Countries** (New York: The Rockefeller Foundation, January, 1977).

Aid to sub-Saharan Africa from the development banks declined, whereas the share allocated to Arabic-speaking countries increased (see Table 6). The share of Asia increased somewhat, but is still low in relation to income and population. The substantial share of multilateral aid given to Latin America can be attributed to the emergence of the Inter-American Development Bank as a substantial lender for education in the region.

The geographical distribution of aid for education bears no clear relationship to the economic or educational development of the recipients. The provision of aid for education, in the case of bilateral donors, appears to be dictated less by objective needs than by historical and political circumstances. In the case of multilateral agencies, assistance is influenced by such factors as the preferences of certain countries for aid for education instead of for other sectors, cultural traditions, the capacity to absorb external assistance, and the fear of encroachment upon the autonomy of a country. Various donor agencies, such as the Overseas Development Administration (ODA) of Britain, the Inter-American Development Bank (IDB), SIDA, UNICEF, and the World Bank, have expressed their willingness to increase aid and, in some cases, to concentrate on the poorest segments of the population. These policies, however, have not yet been put into effect fully.

Issues of External Aid to Education

The debate about external aid to education is concerned with issues of size, cost, and coordination. Because of the large and growing number of illiterates, the unmet need for all kinds of skills at all levels and the unsatisfactory quality and efficiency of the educational and training systems in the developing countries (see Chapter 2), most observers agree that the present level of aid for education is inadequate.

The increase in financial commitments from donors has been offset by inflation, particularly in the area of technical assistance. The cost of an expatriate expert, for example, doubled between 1970 and 1975, indicating less reliance on expatriate experts and more on locally recruited experts. New cost-sharing arrangements will also need to be worked out between donors and recipients, according to the ability of recipients to bear part of the costs. For instance, the British practice of "topping up" salaries of expatriate personnel rather than paying the whole salary may be an effective way of stretching aid. Some recipients argue that aid can sometimes be too expensive, generating high local costs. This applies both to technical assistance and to physical facilities and equipment, where unnecessary sophistication and procurement, sometimes tied to specific markets, have led to high maintenance and replacement costs.

The multiplicity of agencies that provide aid increases the risk of duplication of effort and strains the capacity of recipients to select and design programs. Efforts by such agencies to coordinate aid can, at best, bring about useful joint support of projects and valuable sharing of information. At worst, they may be regarded by recipients as usurping their responsibility for coordinating assistance. While agencies that give aid should continue to clarify and update their policies, a country's own policy for coordinating external assistance must remain the governing factor.

Chapter 9: Review of World Bank's Policies and Programs in Lending for Education

Policy Development, 1963–1978

The policy of the World Bank in lending for education developed gradually between 1963 and 1979. Three phases can be distinguished.

1963–1970. The first education credit was approved by the Executive Directors of the Bank in 1962 (fiscal 1963), and the education financing policy was elaborated in a memorandum from the President of the Bank in 1963. The policies outlined in the memorandum emphasized that the Bank would concentrate on projects in technical and vocational education at various levels, and, in general, secondary education, to meet the needs for trained manpower as defined in the development plans of the countries concerned. Technical assistance and software were largely excluded; the focus was on construction and equipment. In the late 1960s, it was decided that the Bank should broaden the scope of its projects and determine lending priorities by examining the education system as a whole, rather than by areas of eligibility designated *a priori*.

1971–1974. In the first Education Sector Policy Paper, issued by the Bank in 1971, a systematic study of the total education sector of a country was recommended as a prerequisite to financing. Increased Bank financing of technical assistance and new areas for lending, such as nonformal education and training, educational radio and television, local production of learning materials, and more comprehensive aid to administration and management were suggested. The scope of the Bank's educational operations was thus increased to cover not only hardware projects in restricted subsectors, but a mixture of hardware and software projects. The aim was to improve the quality of education and to meet the need for manpower. Lending by the Bank was also marked increasingly by an experimental approach and included support of curriculum development.

1975–1978. In late 1974, a second Education Sector Working Paper was issued in which it was argued that an overemphasis on the modern sectors of the economy in many developing countries had caused an overallocation of resources to secondary and higher education at the expense of primary education and needs for education and training in rural areas. The broadening of development policy within the Bank during this period was reflected in its new education policy. Four principles governing aid to education were articulated: (1) at least a minimum basic education should be provided for all as soon as available resources permit; (2) further education and training beyond the basic level should be provided to meet critical needs for manpower; (3) the efficiency of education systems should be improved and formal and nonformal methods integrated; and (4) opportunities should be equalized in the interests of both increased productivity and social equity.

The Bank's Lending Program

The successive changes in education policy were reflected in the lending by the Bank between 1963 and 1978. Aid for education and training amounted to more than $2.6 billion, a third of which was through the International Development Association (IDA), the Bank's soft-loan affiliate, which contributed to more than half the total costs of projects. Lending increased considerably during these years, and in fiscal 1978, the Bank lent $516 million for education, including project-related training and education components in projects in support of rural and urban development (see Annexes 11 and 12). Up to June 1979, the Bank approved 192 projects in 81 countries, with an average loan or credit of $19 million (see Annex 17).

The Bank has collaborated in the generation of these projects with Unesco by means of a Cooperative Program (CP). This program was started in 1964 to facilitate the financing of education projects in developing countries that are members of both institutions. The Cooperative Program has identified and/or prepared more than two-thirds of the projects financed by the Bank over the life of the program. In fiscal 1978, Unesco was involved in 14 of the 20 projects approved by the Bank. In qualitative terms, Unesco has been a contributing factor to the broadening of the Bank's lending program. The Unesco report, *Learning to Be,* has widely influenced the Bank's thinking in education, and Unesco missions frequently proposed lending in categories which the Bank was not prepared to finance at the time, but which it eventually did, such as curriculum development and primary education.

Two trends are discernible from an analysis of the Bank's past lending program for education. One, lending was not proportional to the distribution of population. For instance, lending to Africa and, to a lesser extent, to East Asia, exceeded the proportions of the total population of the developing world that reside in these regions. In contrast, only 4 percent of the lending went to South Asia, which has 42 percent of the population. The lending on a per capita basis ranged from $0.10 for South Asia to $1.40–$1.80 for Africa and East Asia, and $0.90 for Latin America and the Caribbean. Two, the distribution of lending for education, according to level of income, indicated a certain regressiveness. Middle-income developing countries received somewhat more per capita ($0.70–$0.80) than low-income countries ($0.10–$0.60) during the mid-1970s, an inequity caused by the occasional shortage of IDA funds, the limited absorptive capacity of some low-income countries, and the inability of these countries to meet incremental operational costs.

The distribution of lending for education by *level* for the period 1963–78, shows rapid increases in aid for primary and nonformal education and sharp decreases in support of secondary education (see Table 7). The distribution by *curriculum* shows increasing aid for technical education at the expense of general and diversified curricula. Support of formal agricultural education has decreased de-

Table 7

Distribution of Lending for Education, 1963-83[a]

(percent)

Distribution	1963-69	1970-74	1975-78	1979-83 (projected)
By Level				
Primary	—	5	14	24
Secondary	84	50	43	34
Higher	12	40	26	18
Nonformal	4	5	17	24
Total	100	100	100	100
By Curricula				
General and diversified	44	42	34	35
Technical and commercial	25	30	41	33
Agriculture	19	15	11	11
Teacher training	12	12	12	9
Management	—	—	1	8
Health and population	—	1	1	4
Total	100	100	100	100
By Outlay				
Construction	69	49	48	44
Equipment	28	43	39	35
Technical assistance	3	8	13	21
Total	100	100	100	100
By Scope				
General institutional development				
Learning materials and media	...	2	2	12
Curriculum development	...	1	2	3
Planning and management	...	1	3	6
Specific schools and training institutions	...	96	93	79
Total	...	100	100	100

...data not available.

— Zero or negligible.

[a] Excludes project-related training and education components in multisectoral projects.

spite the emphasis of the Bank on agriculture, whereas nonformal agricultural education is heavily supported through project-related training and extension service projects not included here (but listed in Table 8 on page 95). New curricula, such as management and health training, are emerging slowly.

Construction remains the largest *outlay* in education loans, although it has decreased from 69 percent in the 1960s to 48 percent during the period 1975–78. Technical assistance, on the other hand, has increased, reflecting a new emphasis on the qualitative aspects of education projects. Finally, nonphysical components, which received little support in the past, became more prominent during the 1970s; 7 percent of the total lending during the period 1975–78 went to the financing of educational planning, curriculum development, production of learning materials, mobile units, and the development of educational radio and television. In support of the production of learning materials, the Bank has assisted in producing approximately 200 million textbooks.

Assistance for education and project-related training, as components of projects in other sectors, substantially increased (see Annex 12). In 1978, financial assistance for such training amounted to $99 million, or about 20 percent of the total lending for education. In addition, education components have been included increasingly in urban, rural development, and agricultural projects, receiving $66 million, or 13 percent of total lending for education in 1978 (see also Annex 11).

About 300 colleges for the training of primary teachers, 1,000 technical schools, 1,700 general secondary schools, and 100 faculties or universities have been assisted, and some 10,000 institutions, including primary schools and adult centers, have been constructed or improved under Bank-assisted projects. These projects have often introduced structural changes in education systems, particularly at the secondary level; a majority of the secondary schools assisted now provides diversified curricula with increased emphasis on science and technology. Half the 1.8 million places for students and trainees built under Bank-assisted projects go for primary education, training in basic skills, or agricultural and vocational education; these are expected to benefit primarily low-income groups.

Assessment of the Bank's Aid to Education

Before describing the course of future assistance to education by the Bank, it may be helpful to review present policies and evaluate the performance of Bank projects. Three levels of evaluation are considered here: (1) the content, generation, and implementation of projects; (2) the education input and output of projects which include enrollment, curricula, teachers, the quality of learning, and management; and (3) the external outcome, which includes the effect of projects on the economy and society, employment of graduates, and so on.

Before the lessons of past experience are summarized, three points should be emphasized. First, most of the available information refers to the content, generation, and implementation of projects. There is some information about input and output; unfortunately and unavoidably, however, there is little about the outcome of projects. Second, most of the experiences that are described come from projects conceived in the early stages of the Bank's lending for education. Since those early projects, many changes in lending policy and procedures have been made, and corrective measures have already been applied to several of the issues involved. Third, several problems confronting the Bank and borrowers are derived from the nature of the education sector; analytical tools for designing and assessing projects are undergoing considerable change, the data base and the capacities of borrowers for management and analysis are often inadequate, and educational development requires long-term planning and policy commitment which, with frequent changes in government and personnel, are not always available.

Project Content, Generation, and Implementation

Project Content. As has been noted elsewhere, the Bank's lending in the past was largely confined to hardware for general secondary and technical and vocational education. The shift toward more software and a broader range of project items took place in the late 1960s. The emphasis in policy since 1974 has been on basic education, increased support of software, such as curriculum development and the training of teachers, as well as an increase in project-related training. The present policy on lending allows the Bank to support almost every needy sector of education and training. Nevertheless, some shifts in content have been suggested, especially toward institutional development.

Project Generation. An analysis of past experience suggests that methods of generating education projects have not been adequate. The cost effectiveness of alternative projects has not been sufficiently assessed. Moreover manpower analysis has not been consistently applied, although meeting manpower demand is a major element in the justification of projects. More recently, a growing number of projects has included tracer systems that examine the actual placement of graduates and from which, information on the performance of workers or the reactions of employers, is obtained.

It is also clear that the process of project generation can also be improved. Project generation has been slower in education than in most other sectors assisted by the Bank; as a result, and in an effort to increase its speed and improve its efficiency, the Bank has tended to increase its role in project generation, while the role of the borrower has remained restricted. (Until recently, Unesco and the Bank bore the largest part of the burden of project generation.) A limited role by the borrower was understandable in the past when there was an acute shortage of qualified educators in the developing countries; today, however, the case is no longer true, and the role of the borrower in project generation should be strengthened. Greater participation of borrowers would help avoid the submission of inadequately prepared projects and stimulate the development of local capability—a principal objective of every project—which heavy involvement of the Bank discourages.

Experience has also revealed that many large-scale projects have been financed either without adequate preliminary studies or the use of first-phase experimental projects. There is a trend toward assisting projects that have an experimental and developmental stage; nonetheless, a more deliberate approach by the Bank will improve further the quality of the Bank's investments, particularly those that involve innovative approaches. It should be recognized, however, that the borrower may not readily accept delays, inherent in preliminary studies and first-phase projects, in achieving significant effects. Accelerating large-scale replication of acceptable educational innovations thus remains a challenge to educational development.

Project Implementation. The Bank's education projects have generally been satisfactorily implemented, although with considerable delay. On the average, implementation has taken seven years rather than the estimated four. Time overruns were usually attributed to the inadequate preparation of projects, to the difficulties of the borrower in following the Bank's procedures, and to problems specific to countries, such as local financing and the availability of qualified personnel. With few exceptions, cost overruns have been reasonable; 30 percent of the projects were completed within original estimates. Cost overruns were usually kept down, however, by reducing the scope of the project, altering standards, or shifting funds from one component of the project to another. If time overruns cannot now be reduced, cost overruns of projects approved after 1974 will surely increase because of the rapid inflation that has taken place worldwide since that time.

The quality of the civil works components of education projects has been satisfactory, as has been the provision of equipment, which remains, nevertheless, an issue. Drafting appropriate lists of equipment, and the installation, maintenance, and after-sale services of equipment often create problems, mainly because of a lack of experienced personnel. The Bank has devoted much time in an attempt to resolve some of these issues. But despite the adoption of measures, including the preparation of standard lists and guidelines, the holding of workshops for project implementation staff, and the facilitation of local procurement, the provision of equipment remains a difficult and time-consuming part of project implementation.

Technical assistance programs have been less satisfactorily implemented. First, qualitative changes and institutional development, the usual aims of technical assistance, mature slowly. Thus, too much may have been expected too soon, particularly in those cases in which objectives were not well defined or countries were insufficiently involved in the design of the program. Second, delays and shortfalls have been encountered in recruiting experts, reflecting both the decreasing availability of qualified experts and a growing reluctance by governments to use loans from the Bank to pay for expensive expatriates, judged, in some cases, to be less capable than the country's own nationals. The attitude of the Bank toward the use of local consultants, previously discouraged, has recently changed, however. Their use is now encouraged, especially in "soft" sectors. As in the case of project generation, however, local capabilities are still underused. Fellowship programs, in contrast, have been successfully implemented.

Perhaps, the greatest single constraint on the implementation of projects has been the inability of borrowers to finance fully the operating and recurrent costs because of prior commitments to other recurrent expenditures. Although the Bank has historically been reluctant to finance recurrent costs, it has broadened its definition of project costs to include incremental operating costs. Projects in the education sector have been unduly hesitant in embracing the implication of this broadened definition of project costs.

Inputs and Outputs of Projects

Educational institutions assisted by the Bank have generally achieved or exceeded their enrollment targets. The number of graduates has also been satisfactory, and there are indications that repeater and dropout rates have been reduced. Other quantitative objectives, such as changes in student/teacher ratios and the recruitment of better-trained teachers, have generally been met. In addition, Bank-supported projects have contributed to an increased enrollment of girls in many countries and to an acceptance of coeducational schools. The few studies of performance of the Bank-assisted projects that have included socioeconomic analysis have revealed that the share of students from lower-income groups in schools aided by Bank projects has been higher than average. Many large-scale projects, which made considerable expansion of secondary and higher education possible, supported the educational goals of numerous borrowers during the past 15 years.

The education projects assisted by the Bank in the late 1960s and early 1970s were generally not designed to permit a fully satisfactory assessment of the achievements of students beyond what is revealed by regular university and school examinations. There are indications, however, that academic achievement has improved and that a positive change in attitude toward science and technology in secondary and higher educational institutions has come about. In several projects, progress has been made in introducing better science teaching and practical work in technical and vocational, agricultural, and comprehensive schools.

Yet, the success of diversified curricula and practical options in secondary schools has not met expectations. A review of 79 Bank-assisted projects that include diversified secondary schools with vocational, prevocational, or otherwise broadened curricula, tends to support the view presented elsewhere in this paper on diversified education (see pages 44–45). Expensive facilities have often remained unused, or misused; the causes include lack of suitably trained teachers (despite assurances from the borrower or the inclusion of teacher training as a project component), insufficient funds for the maintenance of equipment and the purchase of necessary consumables, and a lack of clarity of educational objectives of the diversified curricula. The diversified secondary schools can perform a vital function in improving education in developing countries, but they require better preparation and firmer commitment from the borrower before being launched. Because the suitability of a model cannot always be assumed, alternatives should, therefore, be explored.

Outcomes

The external outcomes of most education projects and their omnibus effects on the economy and society can be understood only some time after their completion. This time has not yet come in the case of most education projects. Project reviews show, however, that broad forecasts of needed manpower, included in projects approved in the 1960s, have usually not remained valid during their long cycles because of changes in the economic and educational situation. Targets for middle-level agricultural education needed, at some point, to be lowered. Technical and vocational education programs, in contrast, have generally produced employable persons; and the results of project-related training, operating on a shorter time scale in a single enterprise and with sharply defined objectives, have been positive. The institutions of higher education assisted by the Bank have apparently achieved their external objectives and have produced highly employable graduates. In some instances, the cooperation planned between industrial and agricultural enterprises, on the one hand, and educational institutions on the other, has not developed sufficiently to benefit the economy. As a result, shortages of certain specialized manpower have remained, and graduates from institutions supported by Bank-assisted education projects occasionally had neither the right training nor the right attitude for work in industry and agriculture.

On the whole, most education projects have had a positive effect on institution building. Planning, data processing, program development, contracting and procurement, the use of staff, and the making of timetables for schools have often been improved. Institutional development has generally been limited to the project itself, and efforts will be made in the future to broaden it.

More information about the external outcome of Bank-supported education projects will eventually be known. About 50 current projects include tracer studies, which will follow the progress (or lack of it) of graduates and others leaving school when they enter the labor market. But such studies are only a small step toward a comprehensive and systematic effort at learning from project experience. To aid in this effort, a built-in formative evaluation system—preferably established and managed by the borrower—will increasingly become a routine feature of Bank-assisted education projects.

Chapter 10: Future Policies and Program of the World Bank

Objectives of World Bank Assistance to Education

The World Bank maintains a strong concern for general education and training in specific skills for at least three reasons. First, education is regarded as a basic need, an instrument to help meet other basic needs, and an activity sustaining and accelerating overall development (see Chapter 1). Second, the involvement of the Bank in educational development in the past has contributed to important educational improvements in modifying traditional methods, helping to increase local management capacity, and providing an important acceptable source of funds. Third, despite recent achievements in education—and to a certain extent because of them—education systems confront certain basic weaknesses and a number of inevitable "second generation" problems that further complicate educational development.

The principal aim of the Bank in lending for education is to assist its member countries in developing their human resources, in bringing about educational change and expansion, and in achieving the technical capacity and experience they need to become genuinely self-reliant to design and manage educational development. The Bank also believes that, as an international agency committed to the optimal use of funds for development and active in a wide variety of national and regional settings, it should have a clear view of its own objectives and keep an open mind in its discussions with borrowers.

As reinforcement and extension of its 1974 policy, the Bank seeks to promote balanced educational development on the basis of the following broad principles:

1. Basic education should be provided for all children and adults as soon as the available resources and conditions permit. In the long term, a comprehensive system of formal and nonformal education should be developed at all levels.
2. To increase productivity and promote social equity, efforts should be made to provide education opportunities, without distinction of sex, ethnic background, or social and economic status.
3. Education systems should strive to achieve maximum internal efficiency through the management, allocation, and use of resources available for increasing the quantity and improving the quality of education.
4. Education should be effectively related to work and environment in order to improve, quantitatively and qualitatively, the knowledge and skills necessary for performing economic, social, and other development functions.
5. To satisfy these objectives, developing countries will need to build and maintain their institutional capacities to design, ana-

lyze, manage, and evaluate programs for education and training.

These principles, elaborated below, constitute a policy framework within which the Bank will seek to foster development objectives that are tailored to the needs of its developing member countries; the needs will vary among borrowers, because of differences among countries in cultural and historical backgrounds, economic development, financial capacities, and other factors. Besides, educational conditions and opportunities are changing rapidly within countries as a result of social, economic, and educational developments. No single formula, therefore, can apply to all borrowers. Moreover, because of the nature of education, every country wants to decide its own objectives and priorities for educational development. Under these circumstances, the education policy of the Bank will need to have a high degree of diversity in its application.

In the pursuit of its objectives in lending for education, the Bank's emphasis will vary according to conditions in developing countries. First, in lending to low-income countries, the emphasis will be on the development of low-cost basic education programs to meet the minimum needs for learning of school-age children and uneducated adults—especially women—and on rural training for related target groups within the framework of broad rural development schemes. Conversely, the development of upper levels of formal education will be selective and carefully planned taking into account the limited absorptive capacity of the modern sector for labor and the needs of both the public and private sectors for managerial and technical skills.

Second, in middle-income countries where first-level education is already widely available, the development of skills to meet the needs of increasingly sophisticated economies will have priority. The improvement of quality and of equity in opportunity of first-level education and the development of secondary and higher levels of education will take a more central place in the discussions with these countries. Attention will also be paid to providing basic education opportunities to the urban and rural poor.

Third, measures to improve the internal efficiency will be stressed in all countries; implementation of these measures will precede or coincide with support of further efforts to expand the system. Finally, the improvement of managerial and planning capacities in all countries will be emphasized, while the development of analytic skills will be stressed more for middle-income countries.

Priorities in lending for education to individual countries are set after discussions of policy with borrowing countries and on the basis of studies and plans for education and training, and other sectors of development. The provision of external aid by other donors is also taken into consideration. Because of its experience in development financing and its awareness of technical choices and their outcomes in other countries, the Bank can help enlighten the choices available to a country. General strategies to determine the mix of different areas and kinds of assistance may also be developed for groups of countries that have common characteristics, problems, and levels of development, such as those in the Sahel and in Latin America.

Expansion of Basic Education Opportunities

The interest of the Bank in helping to expand education opportunities for both school-age and adult populations is closely related to its efforts to promote a broad approach to development and its desire to assist in meeting basic human needs. Appropriate basic education enables the majority of the poor, in both rural and urban areas, to lead productive lives and to benefit from social and economic development of the community. Moreover, the effectiveness of higher levels of education depends on the completion of the basic level. Therefore, support for basic education should not be justified by considerations of needs for trained manpower. The Bank considers first-level education the minimum foundation on which countries should gradually and systematically build higher levels of a comprehensive network of formal and nonformal education and training equally accessible to all segments of the population. In many of the middle-income countries approaching universal primary education, basic education may be extended to include a part of second-level education. The Bank will support studies and plans of countries that seek to develop balanced systems of education and will extend its assistance to different forms of higher levels of education.

Most of the assistance of the Bank in providing opportunities in basic education for the school-age population will be concentrated on increasing or upgrading student places, teachers, and physical resources in the formal system. Provision for physical facilities and the training of teachers should, when necessary, be accompanied by two lines of action by the government, for which assistance could also be provided: (1) curriculum development and production of learning materials that are relevant in content and effective for learning, and (2) a strong effort to improve the internal efficiency of the school system along the lines suggested in pages 38–40.

Those countries that have low primary enrollment and work under severe financial constraints will be encouraged to review and revise their educational structures to meet the need for low-cost basic education. The Bank will, for instance, support experiments with traditional first-level systems, such as village schools and Koranic schools, in which the education of students begins in very different ways but will later feed or bridge into the regular channels where a chance for continued education is offered. Special efforts will continue to be made to encourage self-help and participatory planning in countries where these are already part of the culture by providing, as part of educational loans, special funds that can be disbursed to local groups and organizations. Similar efforts will be made to support community and neighborhood management and planning of schools. In addition, the Bank will support feasibility studies to explore ways of expanding and improving education opportunities by means of classes of optimum size, promotion policies, multigraded schools, variations in first-level structure, and teaching with the aid of the mass media. For countries with high primary enrollment ratios, the Bank will support innovative projects and programs intended to improve the quality and efficiency of first-level education, and improve access to it of groups that are not equitably served, such as girls and the urban and rural poor.

The combination of objectives referred to above—physical expansion, curriculum development, production of learning materials, and improvement of internal efficiency—makes the financing of large-scale projects by the Bank advantageous. Quite apart from physical inputs, much of which should come from local sources, the economies, greater efficiencies, and equitable distribution sought can have a significant impact only when applied on a national scale. Research and planning in these areas become more meaningful with the prospect of substantial action programs following. Moreover, large-scale projects allow the use of standard designs and components, which can reduce the cost of implementing programs.

To reach adults and out-of-school youth, the Bank will support urban and rural development projects that combine education and training with the daily activities of adults. It will also continue to explore, with interested member countries, nonformal means of providing second-chance learning for those who missed formal schooling earlier. Also important is education for women to improve their knowledge and skills, their attitudes toward education in general and their children's education in particular. Countries with a high ratio of educated females to males perform better in meeting basic needs than those with lower ratios.

Meeting the capital required for universal basic education in developing countries during the next several decades is feasible if strong national efforts are made to improve internal efficiency and, in concert with donor agencies, to provide physical resources. The constraint in low-income countries will be the difficulty of meeting the resulting increases in recurrent costs. Available resources, however, may suffice for many developing countries, if improvements are made in internal efficiency. But some external assistance in meeting recurrent expenditures will be necessary for about two dozen countries in which at least half the children of primary-school age are out of school.

Equity

Lending for education is based on the premise that the Bank and the borrowing member country both intend to reduce disparities in education opportunity. Because the issues involved are culturally or politically sensitive, careful cooperation between the Bank and its member countries is required to transform this general commitment to equity into effective actions. The planning of support from the

Bank for educational activities to promote equity, moreover, should be coordinated with other interrelated processes and programs that foster social change and economic betterment. The objective of achieving equity is part of a comprehensive policy of the Bank to concentrate efforts of all sectors, increasingly though not exclusively, on providing assistance to the poor. The provisions made for reaching the poor will continue to play an important part in determining the Bank's support for projects and for discussions with member countries.

Providing equality of opportunity is an objective that may be approached but never fully realized; it has not been achieved by even the most developed countries. It is not a program that can be financed in itself; it is rather a theme that should suffuse all lending by the Bank for education. The Bank will, therefore, support the efforts of a government to redress imbalances in the opportunities available for education and training along the following lines of action:

1. Specifications for an increase in the number of institutions and places will be drawn in accordance with analytic methods of school location planning, including a larger component of economic, demographic, and occupational analysis.

2. Projects should attempt to equalize quality in the provision of input, such as books, teachers, space, and equipment, to counteract the inevitable tendency of large centers of population and other relatively affluent areas to receive a disproportionate share.

3. Provision of staff and student housing, which may seem uneconomical and wasteful in itself, is sometimes essential to broadly distribute qualified teachers, to make school accessible to students living beyond an acceptable distance from the institution concerned, and to improve educational achievement by students. Most external agencies with limited resources tend to avoid student housing, but the large loans of the Bank, coupled with austere standards, may be valuable in this area.

4. Because selection of students to advanced levels of learning is necessary, both the criteria and the procedures for selection are crucial. The Bank will support the review of selection mechanisms used by the country itself.

5. Where equity in opportunities is constrained by lack of demand for educational services, it is necessary to ensure that the educational services provided are appropriate to the society concerned. Measures can include modifying the school calendar, segregating middle schools by sex in some areas and replacing them with coeducational schools in others, subsidizing learning materials, and providing midday meals.

In the identification and design of education projects, the Bank will seek to assess the extent to which education programs achieve an appropriate balance between equity and other educational objectives, such as quality and the development of skills, and will continue to encourage borrowers to include monitoring schemes within projects to determine the beneficiaries of investment in education.

Efficiency

The Bank will continue to research and support a wide range of alternatives to raise the level of internal efficiency of education systems (see Chapter 4). To improve the efficiency in learning, the Bank will support projects involving curriculum development, preparation and production of instructional materials, the training of teachers, and the use of the mass media and distance-learning techniques. Whenever possible, the Bank will support attempts to improve preschool conditions for child development. Such attempts may include improved education for health, nutrition, and child development in adult education programs as well as in the curricula of primary and secondary schools, extension programs at the village and neighborhood levels to educate parents, and development of formal preschool institutions in countries in which the goal of universal primary education is approached.

To improve the quantitative efficiency of education systems, measures are needed to be taken by the government, such as structural change, variation in class size, changes in promotion policy, fuller use of facilities, multigraded or nongraded classrooms, and conditions of entry. In any case, these issues will form part of the dialogue between the Bank and its members and, where appropriate, they will be explored through Bank-assisted feasibility studies. Efforts to identify and eliminate the causes of high rates of attrition and repetition will also be supported through a systematic use of built-in evaluation systems in education projects.

The Bank will continue to emphasize the financial criteria for assisting education projects and development strategies. The criteria will include a balanced distribution of expenditure among different components within the education system and between the education sector and other sectors of development, the ability and commitment of a country to finance recurrent costs in both plans and projects, the reasonability of unit costs in projects, and the replicability of projects on the desired scale.

Meeting Manpower and Skill Requirements

Various combinations of formal, nonformal, general, and specialized education and training schemes were considered in Chapter 5. These combinations cover a wide spectrum, including formal general education, diversified schools, professional training, on-the-job training, and a combination of education and work. The applicability of these choices in the modern, informal urban, and rural subsectors of the economy were also described. The Bank's more recent concern about expanding basic and primary education does not reduce its interest in developing critical manpower. The Bank will support three forms of training: general pre-employment training for the labor market at all levels in projects of the education sector, project-related training, and training for the rural sector, and the urban, informal sector within the urban or rural development projects.

The World Bank will support general pre-employment training for the labor market by funding tracer studies as a preliminary step to the identification of education and training projects. In many countries, employment problems of varying proportions among persons leaving school will necessitate close scrutiny of investments in long and expensive programs of pre-employment technical education in the formal system. Nonformal programs offered at an accelerated pace in vocational training centers following junior secondary school—or, in austere situations, at the completion of all or parts of primary level education—may prove more effective and less costly than formal technical and vocational institutions. A substantial part of the training supported by the Bank will include programs for retraining or upgrading the skills of both rural and urban workers or the jobless. Training in management at all levels and for all sectors will have a high priority.

The Bank will continue to support project-related training designed to meet three principal objectives: (1) ensure that qualified manpower is available to operate the project or enterprise, (2) improve planning, finance, and other management functions of the institution beyond its daily operations, and (3) create a capability within the entity to handle the need for developing manpower beyond the life of the project. Project-related training, which provides specialized managerial, technical, or operational skills pertaining to a particular sector, does not duplicate the training offered in schools or vocational training institutions; rather, the two are complementary. To this end, the Bank's approach now embraces the formal and nonformal systems, in addition to project-related training, as a national policy for developing human resources.

The relationships between middle-level education and work are intricate and diverse. The Bank will, therefore, analyze previous experiences systematically; assist developing countries to experiment with promising concurrent and successive blends of general and vocational education, in-school and out-of-school training, short and long training courses, and combinations of education and work and with forging appropriate links between ministries responsible for education and labor; and finance tracer studies within vocational education projects to identify and monitor changes in attitudes and habits of productive workers.

New programs must reach the rapidly growing urban and rural populations, and education and training must become more relevant to the living conditions of these groups. The Bank will continue to finance project components, both in education and in other sectors, for meeting this objective as well as for developing lasting training capability and organizational framework. In addition, the Bank will monitor new approaches in these fields. In the rural development sector, future lending by the Bank will seek to strengthen links among formal education, vocational education, and field extension services.

In the 1980s, there will be an increasing demand for more secondary education, as improvements in the internal efficiency and the widening of scope of first-level education produce an increase of potential applicants for the middle level. The Bank will review mechanisms for providing general secondary education at reduced costs and consider funding exploratory projects to assess their feasibility. It will also support the expansion of secondary education at reduced unit costs in some countries, but will limit its support to improving the quality of education at this level elsewhere, depending on the scope and quality of this level of education in the country concerned.

As in the past, the Bank will continue to support higher-level education and training selectively in postsecondary training institutions and in universities. Support for tertiary education will generally be for building specific resources that are important for development, such as centers for agricultural and industrial research and professional training programs; developing managerial capacity through management programs and institutes; establishing basic research capabilities, through programs and centers, in the various disciplines of natural and social science; and setting up "outreach" programs to directly involve universities in national development.

Experience has shown that isolated improvements in an otherwise inefficient system are ineffective. The Bank will, therefore, encourage schemes for the general improvement of the efficiency and management of a university system, such as staff development, reorganization, better use of staff time and physical facilities, and so on. To alleviate critical shortages of professional manpower, assistance will be provided to increase student places in development oriented disciplines, such as agriculture, engineering, medicine, science, economics, and management, and in developing alternatives to the university model, such as community colleges, polytechnics and the open university.

Improving the knowledge and skills required for economic development is closely related to improving technology and developing indigenous technological capacity. The Bank will, therefore, continue to provide assistance to elements of technological infrastructure, such as laboratories for applied research, standards institutions, preinvestment facilities, technical information centers, and consulting and engineering organizations. The development of analogous institutions in the fields of social science, management, and public administration will also be encouraged.

Developing a Capacity for Analysis and Management in Education

Both borrowers and lenders have been preoccupied with individual projects at the expense of long-range development of national capacities to analyze, design, improve, and manage education systems. The Bank has, in the past, tried to focus on the longrange aspect, but its emphasis on projects as units of operation has resulted in a rather *ad hoc*, disjointed method of meeting a country's short-term and long-term needs.

Attempts will be made in the future to provide a better focused and more sustained support to programs seeking to establish indigenous capacities in management, planning, and research (see Chapter 6), while recognizing the complexity of the issue and the Bank's own limitations in influencing the management of the education sector through project input. National capacity for managing the education system cannot be developed in isolation from the management capacity of a country; the efforts of the Bank in education will, therefore, be to promote programs specifically attuned to a country's need that encompass efforts in other sectors. To this end, the Bank will continue to support studies to improve the organizational structure of education systems, experiments in decentralization and participatory management, and training of education personnel in management through existing general management institutes, specialized educational management centers, or *ad hoc* courses and apprenticeships, and development of managerial capacity at institutions of higher education.

The Bank will support the creation of analytic capacity (planning and research) by promoting projects for training individuals in analytic skills and knowledge; institutional development projects for providing the organizational framework, facilities and equipment for conducting research; and research, experimentation, and evaluation components within education projects.

The Bank's Lending Program and Operations

Several crucial implications for lending program and operations follow from the discussion so far on the status and significance of education, general strategies for improving education systems, and the principal objectives of lending by the Bank for education.

Lending Program

The commitment of the Bank to development entails a far-reaching concern for education and training. Lending for these purposes is channeled in three principal ways: through direct loans to the education sector to enlarge or improve opportunities for education and training; through loans to other sectors, such as power and transportation that include components that support the training of persons for operating and maintaining projects ("project-related training"); and through loans to integrated projects spread across several sectors (especially urban and rural development) that include components for expanding educational activities within the project area ("education components"). Table 8 provides an overall view of lending; it reveals the emergence of project-related training and education components in projects for urban and rural development. During the next five years, the Bank is expected to allocate to education and training, an average annual amount of $900 million, representing about 8 percent of total lending, of which $200 million will cover project-related training and about $100 million will be lent for education components of urban and rural development projects. The projected program for 1979–83, outlined in Table 7 (see page

Table 8

Average Annual Lending for Education and Training by World Bank, 1970-83

(in million U.S. dollars)

	1970-74 (actual)	1975-78 (actual)	1979-83 (projected)
Total Bank lending	3,076	6,846	11,580
Loans and credits to education sector	163	281	600
(As percentage of total lending by World Bank)	(5.3)	(4.0)	(5.2)
Project-related components of training	6.5[a]	93[b]	205
Education components in urban and rural development projects	. . .	38[c]	100[d]
Total lending for education and training	169.5	412	905
(As percentage of total lending by World Bank)	(5.5)	(6.0)	(7.8)

. . . data not available

[a] 1972 only.

[b] Average for 1976-78.

[c] 1977 only.

[d] 1.5 percent of urban lending and 0.5 percent of lending for agriculture and rural development.

80) and Table 8, represent tentative lending plans that will evolve in the course of time in response to the needs of borrowers.

The breakdown of the Bank's lending program reflects the desire that every country have a diversified, comprehensive, flexible, and yet unified network of provisions and opportunities for education and training. The lending agenda, therefore, covers the three conventional levels of formal education, nonformal education, project-related training, and the building of institutional capacity. The lending pattern reflects the emphasis on basic education. Support for primary education is expected to continue to increase, reaching 24 percent during the period 1979–83. The nonformal component, principally education and training for youth and adults, is also expected to rise to 24 percent (see Table 7) and the focus of education components in urban and rural development projects will be predominantly on first-level education. However, the shift toward first-level education will depend not only on the Bank, but also on the willingness of individual countries to obtain assistance for these purposes.

Nature of Loans

The Bank will increase its support for software components that complement buildings and equipment. Table 7 shows the steady increase in assistance for developmental activities, such as curriculum development, learning materials, planning and management, and media. Although assistance for planning and management training has been inadequate in the past, efforts will be made to increase it substantially in the coming years.

The growing attention to nonphysical aspects of education projects, however, does not mean that the Bank is neglecting its concern for physical facilities. The Bank will provide funds for buildings and equipment, help borrowers to improve the appropriateness and the design standards of physical inputs, and develop a national capacity for local production of instructional materials and certain components of construction.

More attention will be paid to project complementarities within education, for example, by providing training for teachers when new curricula are developed. Similarly, attention will be paid to complementarities across sectors, such as between the diffusion of education and provision of access roads, or between technical training and the mix of wages and incentives. In view of such complementarities, the Bank will encourage programs such as population education, health education, environmental education, and education components of urban and rural development projects.

Although the comparative advantage of the Bank will continue to make it a preferred source of funds for large projects, it might be necessary to begin certain projects with an introductory phase before replicating them on a large scale, for two reasons: (1) to ascertain cost factors, adapt curricula, assess staff training requirements, and improve the design of the project, and (2) because a proposed educational improvement may be relatively new to a country, so local testing and experimentation with various possibilities may be necessary before their adoption.

Because of modifications in the nature of loans, the Bank will broaden the definition of "project cost" that is eligible for financing, to include, as has been done in other sectors, incremental operating costs during the implementation period, startup costs, costs of training teachers, curriculum development, and so on.

Analytic Base of Project Development

The task of designing, implementing, and assessing the impact of education and training projects is difficult for the Bank and the borrower alike because of an inadequate base of analysis and experimentation. The Bank will encourage efforts to improve analytic methods for designing and assessing projects; support built-in evaluation components within projects; strengthen its collaborative association with the professional community and maintain an interchange of views between Bank staff and experts in both developing and developed countries; improve the process of testing, developing, and spreading, within Bank staff, ideas concerning educational improvements in different settings; and continue to support technical assistance whenever it is required. In keeping with the general trend throughout the Bank, technical assistance for education projects will be obtained within the country whenever available. The Bank will continue to collaborate with Unesco in the Cooperative Program, and increase the frequency and scope of professional exchange of views on sector analyses, policy issues, and results of research and evaluation. The Bank will also initiate and maintain contact with other specialized international agencies, such as UNICEF, in areas of education that are of mutual concern.

Conclusion

The educational needs among developing countries are diverse and the policies and strategies depend on local conditions. Such a situation necessitates a continuing dialogue between the Bank and its member countries, as well as greater collaboration between the Bank and professional institutions and experts in the developing countries. The emphasis on well-formulated sector work as a basis for lending provides the Bank an opportunity for such a dialogue; and the development among developing countries of national capacities for analysis and management in education makes such a dialogue more valuable.

It is hoped that this collaborative relationship will evolve in such a way that the role of the borrower will increase gradually during the project cycle in activities where the leading part has usually been played by the Bank or other external agencies. Countries will be encouraged to conduct their own sector reviews that may involve broad participation by public and private professional management and representative groups. This would result in a set of priorities, programs, and plans for national educational development, articulated by countries and used as a basis for dialogue on policy with the Bank, and for generating projects that increasingly focus on sectorwide policy issues.

As the capabilities of the borrowers develop, identification, preparation, and evaluation of projects would progressively become their responsibility. While Unesco and the Bank will continue to provide assistance to countries in project preparation and sector analysis, the form will gradually change from direct responsibility to that of guidance, although in some countries a more active role by the Bank will still be needed for some time. The Bank will cooperate with borrowers to speed up this process by supporting training programs to build up national technical and analytic capacities and by offering guidance through seminars and joint involvement in the different stages of the project cycle. At the same time, the Bank will continue to approach lending for education and training in an experimental posture and with an open mind, and will systematically analyze experiences derived from projects to enrich its dialogue with borrowers and to strengthen the analytical basis for the evolution of its policy of lending for education.

ANNEXES

Selected Developing Countries Grouped By Income Per Capita

Level of annual income per capita (in 1975 U. S. dollars)	Number of countries	Total population 1975 (millions)	Percentage of total population in each group	Asia
Low-income countries (less than $265)	36	1,156	60	Bangladesh Burma Democratic Kampuchea India Indonesia Laos Nepal Pakistan Sri Lanka
Lower middle-income countries ($265–520)	21	269	14	Papua New Guinea Philippines Thailand
Intermediate middle-income countries ($521–1075)	21	380	20	Republic of Korea Malaysia
Upper middle-income countries ($1076–2500)	14	121	6	Hong Kong Singapore
Total (all groups)	92	1,926	100	

Region			
Eastern Africa	Western Africa	Europe, Middle East, and North Africa	Latin America and the Caribbean
Burundi Ethiopia Kenya Lesotho Madagascar Malawi Mozambique Rwanda Somalia Tanzania Uganda Zaire	Benin Central African Republic Chad The Gambia Guinea Guinea-Bissau Mali Niger Sierra Leone Togo Upper Volta	Afghanistan Yemen Arab Republic People's Democratic Republic of Yemen	Haiti
Botswana Sudan Swaziland Zambia	Angola Cameroon People's Republic of the Congo Equatorial Guinea Liberia Mauritania Nigeria Senegal	Egypt Jordan Morocco	Bolivia El Salvador Honduras
Mauritius	Ghana Ivory Coast	Algeria Syria Tunisia Turkey	Brazil Chile Colombia Costa Rica Dominican Republic Ecuador Guatemala Guyana Mexico Nicaragua Paraguay Peru
	Gabon	Bahrain Iran Iraq Lebanon Yugoslavia	Argentina Jamaica Panama Trinidad and Tobago Uruguay Venezuela

Size of Enrollments and Annual Increases in Developing Countries, by Income Level, 1960-75

Level of education and group of countries by income level[a]	Number of students, 1960 (millions)	Annual increase, 1960-65 (percent)	Number of students, 1965 (millions)	Annual increase, 1965-70 (percent)
First level	117.0	6.5	160.0	4.3
Low income	58.5	7.1	82.4	4.0
Lower middle income	17.4	4.9	22.1	4.1
Intermediate middle income	30.3	6.8	42.2	5.4
Upper middle income	10.8	4.3	13.3	2.6
Second level	22.6	10.0	36.5	6.7
Low income	15.0	9.5	23.7	5.4
Lower middle income	2.1	11.6	3.6	8.5
Intermediate middle income	3.5	11.4	6.0	10.6
Upper middle income	2.0	10.3	3.2	7.1
Third level	2.2	10.2	3.5	10.4
Low income	0.8	11.3	1.4	11.6
Lower middle income	0.5	10.3	0.8	5.7
Intermediate middle income	0.5	10.9	0.8	14.0
Upper middle income	0.4	6.7	0.5	8.0
Total				
All developing countries	141.8	7.2	200.0	4.6
Low income	74.3	7.7	107.5	4.6
Lower middle income	20.0	5.8	26.5	4.8
Intermediate middle income	34.3	7.4	49.0	6.2
Upper middle income	13.2	5.3	17.0	3.6

[a] For definition of groups of countries, see Annex 1.

Number of students, 1970 (millions)	Annual increase, 1970-75 (percent)	Number of students, 1975 (millions)	Annual increase, 1960-75 (percent)	Aggregate increase, 1960-75 (percent)
197.9	3.6	236.4	4.8	102
101.0	3.6	120.7	4.9	106
27.0	4.0	32.8	4.3	88
54.9	3.7	65.7	5.3	115
15.0	2.6	17.2	3.1	59
50.7	6.4	69.0	7.7	205
30.9	4.6	38.6	6.4	157
5.4	8.3	8.0	9.5	281
9.9	9.5	15.6	10.5	346
4.5	8.4	6.8	8.5	240
5.8	10.4	9.5	10.3	332
2.4	5.0	3.1	9.5	288
1.1	7.5	1.5	7.6	200
1.5	17.0	3.4	13.6	580
0.8	14.0	1.5	7.0	275
254.4	4.4	314.9	5.4	122
134.3	3.9	162.4	5.4	117
33.5	4.9	42.3	5.2	111
66.3	5.0	84.7	6.2	147
20.3	4.8	25.5	4.5	93

Source: Data from the Statistical Division of Unesco, compiled at the World Bank.

Enrollment Ratios in Developing and Developed Countries by Level of Education, 1960-75

(in percent)

Income group	First Level			
	1960	1965	1970	1975
Low				
Gross	48	58	61	64
Net	42	50	52	56
Lower middle				
Gross	59	65	69	73
Net	47	53	55	58
Intermediate middle				
Gross	71	84	95	102
Net	53	63	70	75
Upper middle				
Gross	85	93	96	102
Net	72	76	80	85
Total				
Developing countries				
Gross	57	66	71	75
Net	47	54	58	62
Developed countries				
Gross	114.3	118.4	119.6	119.9
Net	91.3	92.1	93.4	93.8

Note: "Net enrollment ratio" refers to percentage of the population between the ages of 6 and 11 enrolled in primary school.

[a]For definition of groups of countries, see Annex 1.

Annex 3

Second Level				Third Level			
1960	1965	1970	1975	1960	1965	1970	1975
15	21	23	25	0.9	1.4	2.3	2.4
8	13	16	21	2.3	3.4	4.0	4.8
11	15	20	28	1.8	2.7	4.3	7.6
20	27	33	45	4.5	5.7	6.7	11.3
14	19	22	26	1.5	2.2	3.2	4.4
51	59	63	68	10.7	16.7	19.7	22.9

Source: Data from the Statistical Division of Unesco, compiled at the World Bank.

Annex 4

Number of Children Between the Ages of 6 and 11 Enrolled and Out of School, by Countries Grouped According to Income Level, 1960-75

(in millions)

Income group[a]	1960	1965	1970	1975
Low				
Population	121.2	143.3	166.9	187.2
Number enrolled	50.9	71.3	86.6	104.7
Number out of school	70.3	72.0	80.3	82.5
Lower middle				
Population	29.3	34.0	39.2	45.0
Number enrolled	13.9	18.0	21.4	26.0
Number out of school	15.4	16.0	17.8	19.0
Intermediate middle				
Population	42.5	50.5	58.0	64.7
Number enrolled	22.5	31.7	40.5	48.2
Number out of school	20.0	18.8	17.5	16.5
Upper middle				
Population	12.7	14.3	15.7	16.9
Number enrolled	9.1	10.9	12.6	14.4
Number out of school	3.6	3.4	3.1	2.5

[a] For definition of groups of countries, see Annex 1.

Source: Data from the Statistical Division of Unesco, compiled at the World Bank.

Annex 5

Percentage of Primary School Places Taken by Overage Pupils, 1965 and 1975[a]

Income group[b]	1965	1975
Low	13.5	13.3
Lower middle	18.6	20.7
Intermediate middle	24.9	26.7
Upper middle	18.0	16.3

[a] "Overage pupils" refers to those over the age of 11 years.

[b] For definition of groups of countries, see Annex 1.

Source: Data from the Statistical Division of Unesco, compiled at the World Bank.

Annex 6

Teacher-Pupil Ratios in Developing Countries Grouped According to GNP Per Capita and by Level of Education, 1960-75

Group of developing countries according to GNP per capita[a]	Level of education		
	Primary	Secondary	Higher
Low			
1960	36	23	20
1965	39	24	20
1970	37	22	21
1975	38	21	18
Lower middle			
1960	36	19	21
1965	35	21	20
1970	34	23	18
1975	34	22	19
Intermediate middle			
1960	40	12	9
1965	40	13	8
1970	40	14	11
1975	32	20	16
Upper middle			
1960	29	13	14
1965	27	15	11
1970	26	16	13
1975	24	17	14

[a] For definition of groups of countries, see Annex 1.

Net Enrollment Ratios in Developing Countries by Age Group and Sex, 1975 and 1977

Region*/Country	6-11 years of age[a]		
	All	Male	Female
Asia			
Bangladesh	52.8	75.9	28.5
India	63.7	76.0	50.3
Indonesia	66.1	69.0	63.1
Korea, Republic of	100.0	100.0	100.0
Malaysia	92.0	93.5	90.5
Nepal	37.2	56.8	16.7
Pakistan	44.7	62.9	25.3
Philippines	78.2	76.4	80.0
Singapore	97.6	98.2	97.1
Sri Lanka	...	61.0[b]	63.0[b]
Thailand	79.3	80.4	78.3
Eastern Africa			
Botswana	86.9	80.7	93.0
Burundi	18.5	22.3	14.7
Ethiopia	17.4	22.8	12.1
Kenya	89.9	93.0	86.6
Lesotho	76.6	62.3	91.0
Madagascar	69.6	73.5	65.7
Malawi	43.1	48.8	37.4
Mauritius	90.0	91.9	88.1
Rwanda	49.9	52.6	47.1
Somalia	21.7	25.7	17.7
Sudan	30.6	35.5	25.5
Swaziland	79.8	78.2	81.5
Tanzania	53.8	57.5	50.0
Uganda	47.1	56.0	37.9
Zaire	65.7	74.6	56.9
Zambia	68.4	70.2	66.6
Western Africa			
Benin	41.8	57.0	26.8
Cameroon	85.5	93.2	77.9
Central African Republic	56.8	73.8	40.1
Chad	30.0	43.8	16.7
Congo, People's Republic of The	100.0	100.0	100.0
Gabon	100.0	100.0	100.0
The Gambia	28.7	38.4	19.0
Ghana	42.5	46.6	38.4

12-17 years of age[a]			18-23 years of age[b]		
All	Male	Female	All	Male	Female
12.2	18.0	6.0	3.9	6.8	0.8
26.7	35.3	17.5	5.9	8.9	2.7
37.6	42.5	32.4	6.7	9.3	4.1
67.3	73.3	60.8	12.5	16.7	8.1
57.7	62.4	52.8	3.0	3.8	2.1
15.3	21.4	4.9	1.6	2.5	0.6
13.6	20.1	6.6	3.0	4.5	1.3
63.2	65.0	61.2	22.7	21.8	23.6
62.5	62.9	62.1	9.5	13.2	5.6
...	54.0[b]	54.0[b]	...	...	...
32.3	36.8	27.6	6.2	7.9	4.5
40.3	34.5	46.1	6.0	7.9	4.4
13.2	10.6	15.8	1.2	1.8	0.6
17.8	25.6	10.1	2.7	4.7	0.8
52.4	44.9	45.9	6.1	9.7	2.5
64.2	52.3	75.8	4.9	6.2	3.6
25.8	29.4	22.2	5.3	6.7	3.9
45.6	58.1	33.2	1.8	3.1	0.5
54.3	57.4	51.3	7.1	9.7	4.6
16.5	19.0	13.9	0.8[c]	1.4[c]	0.3[c]
23.7	32.4	15.1	3.7	6.3	1.1
19.9	23.8	15.9	5.6	8.8	2.3
66.1	67.8	64.4	15.8	21.1	10.6
32.1	41.3	22.8	1.3	2.1	0.6
22.7	27.3	18.0	2.4	3.6	1.2
48.3	60.1	36.7	3.7	6.2	1.3
56.3	67.5	45.2	3.8	6.4	1.2
20.3	27.0	13.7	3.9	5.7	2.1
49.0	59.0	39.0	6.0	9.1	3.0
25.2	37.5	13.4	2.4	4.2	0.6
13.8	22.3	5.8	1.0	2.0	0.1
97.5	100.0	81.3	20.0[c]	29.1[c]	11.2[c]
88.0	100.0	75.6	11.5[c]	15.9[c]	7.1[c]
16.8	23.1	10.5	0.7	1.3	0.1
48.6	55.1	42.1	8.1	11.9	4.0

Net Enrollment Ratios in Developing Countries by Age Group and Sex, 1975 and 1977 (continued)

Region*/Country	6-11 years of age[a]		
	All	Male	Female
Guinea	26.0	34.8	17.3
Ivory Coast	70.7	85.9	55.7
Liberia	36.0	44.1	28.1
Mali	21.0	27.9	14.0
Mauritania	23.2	30.2	16.2
Nigeria	65.8	72.2	59.0
Senegal	35.4	42.6	28.3
Sierra Leone	34.8	40.9	28.7
Upper Volta	12.2	15.4	9.0
Europe, Middle East, and North Africa			
Afghanistan	16.8	27.2	5.9
Algeria	74.7	85.3	63.8
Bahrain	78.1	84.1	71.8
Egypt	69.5	82.5	55.9
Iran	72.3	86.2	57.8
Iraq	83.7	100.0	64.9
Jordan	76.4	80.2	72.4
Lebanon	89.2[b]	93.2[b]	85.0[b]
Morocco	43.9	54.6	32.8
Oman	40.9	54.7	26.5
Syria	93.9	100.0	78.4
Tunisia	77.2	85.3	63.8
Turkey	67.7	72.4	62.8
Yemen Arab Republic	23.0	40.7	4.7
Yemen, People's Democratic Republic of	67.6	84.5	50.3
Latin America and the Caribbean			
Bolivia	73.4	76.8	70.0
Brazil	65.4	65.3	65.5
Chile	100.0	100.0	100.0
Colombia	64.1	61.8	66.6
Costa Rica	96.0	95.6	96.5
Dominican Republic	71.1	69.3	73.0
Ecuador	75.8	75.6	76.0
El Salvador	65.8	64.9	66.3
Guatemala	47.9	50.4	45.3
Guyana	95.6	94.5	96.8
Haiti	39.6	41.8	37.3
Honduras	66.4	66.2	66.6
Jamaica	90.9	89.3	92.5

12-17 years of age[a]			18-23 years of age[b]		
All	Male	Female	All	Male	Female
21.4	31.3	11.7	7.2	12.1	2.3
50.9	69.8	32.1	8.9	14.1	3.8
40.8	58.3	23.5	6.0	9.0	3.1
16.5	20.7	12.0	3.2	5.1	1.3
18.6	27.1	10.1	1.9	3.5	0.4
32.4	39.0	25.8	2.5	3.6	1.4
26.2	34.5	17.9	7.4	11.1	3.8
23.1	30.7	15.6	4.6	6.6	2.7
6.2	8.1	4.1	0.5	0.8	0.3
13.9	22.8	4.1	3.0	5.2	0.7
40.3	51.2	29.0	6.3	8.9	3.7
85.2	91.0	79.3	...	...	...
39.0	49.0	28.6	19.9	26.4	13.1
59.2	73.4	44.5	14.3	19.1	9.2
54.6	72.9	35.3	16.5	23.7	8.9
57.7	64.1	51.1	8.3	10.1	6.3
62.6[b]	69.8[b]	55.3[b]	30.7	42.7	18.2
29.5	37.0	21.6	4.5	6.6	2.2
18.3	27.7	8.5	0.9	1.0	0.8
55.2	70.7	39.2	18.2	27.0	8.9
48.4	54.4	42.1	12.3	17.5	7.1
55.9	71.7	39.6	10.9	16.3	5.3
8.4	14.9	1.7	1.1	1.9	0.3
33.1	50.4	15.4	6.7	10.7	2.5
49.0	58.7	39.0	13.6	16.9	10.1
52.4	52.0	52.9	23.3	22.8	23.9
83.0	83.1	82.9	20.7	24.0	17.4
59.1	58.4	59.9	15.4	19.0	11.8
50.5	49.1	52.1	15.7	17.2	14.2
58.1	57.6	58.6	16.8	18.9	14.6
60.3	61.8	58.7	28.1	34.8	21.3
50.4	52.8	48.0	13.6	17.2	9.8
30.1	33.9	26.0	8.0	11.1	4.8
70.0	69.5	70.4	7.4[d]	9.2[d]	5.6[d]
40.8	46.2	35.4	3.5	5.6	1.5
39.7	39.8	39.6	10.3	13.2	7.4
72.7	70.8	74.6	6.1	6.9	5.4

Net Enrollment Ratios in Developing Countries by Age Group and Sex, 1975 and 1977 (continued)

Region*/Country	6-11 years of age^b		
	All	Male	Female
Mexico	91.2	92.1	90.3
Nicaragua	59.8	58.6	61.0
Paraguay	75.1	75.5	75.0
Peru	82.4	83.8	80.9
Trinidad and Tobago	95.1	95.5	94.6
Uruguay	70.9	67.4	74.4
Venezuela	84.3	84.3	84.4
Total Developing Countries	64.0	71.8	56.1
Total Developed Countries	94.0	94.0	94.1
World Total	70.9	77.1	64.7

Note: Ratios exceeding 100 percent are the result of errors in data on either enrollment or population.
*Countries are grouped by region according to World Bank grouping of borrowing countries. "Asia" region in this annex includes both "East Asia and Pacific" as well as "South Asia."

12-17 years of age[a]			18-23 years of age[b]		
All	Male	Female	All	Male	Female
63.6	67.4	59.8	12.6	17.9	7.0
49.1	53.9	55.4	12.9	15.8	10.0
50.2	51.7	43.6	10.1	10.6	9.6
70.8	76.6	64.9	33.1	40.9	25.2
49.8	49.3	50.2	10.3	13.2	7.5
68.4	67.2	69.7	22.1[c]	22.8[c]	21.3[c]
57.5	55.2	59.8	19.7	20.3	19.1
38.0	43.9	31.7	8.7	11.3	5.9
86.5	86.0	87.2	30.0	32.6	27.3
52.3	56.6	48.5	16.1	18.8	13.4

Symbols:

[a] 1977
[b] 1975
[c] 1974
[d] 1973
... "not available"

Source: Data from the Unesco Office of Statistics.
See also map foldout on page 145.

Annex 8

Gross Enrollment Ratios for Grade 1 as Percentages of the Total Number of Six-Year-Old Children, by Country and Sex, 1966 and 1976

Region*/Country	1966		1976	
	Male	Female	Male	Female
Asia				
Bangladesh	121.6	63.5	198.9	125.6
India	162.2	108.6	146.9[f]	103.7[f]
Indonesia	...	...	128.6	113.7
Korea, Republic of	107.5	104.0	113.5	113.5
Nepal	...	...	166.8	47.4
Pakistan	88.4	33.3	102.1[h]	52.3[h]
Papua New Guinea	...	...	79.2	54.7
Philippines	150.7	141.6	115.3[h]	110.2[h]
Singapore	101.9	102.2	100.3	98.3
Thailand	138.5	129.4	119.4	111.4
Eastern Africa				
Botswana	103.6	125.4	123.8	126.9
Burundi	73.6	35.2	32.3	22.0
Ethiopia	30.1	11.9	46.9[f]	21.1[f]
Kenya	73.2	54.2	139.8	127.3
Lesotho	173.3	215.1	169.9	189.3
Madagascar	128.3[b]	114.0[b]	190.4[h]	164.6[h]
Malawi	...	...	139.1	114.2
Mauritius	107.0	100.5	91.9	89.0
Rwanda	133.4	107.2	103.3	92.8
Somalia	14.5	5.0	94.9	62.4
Sudan	43.1	22.7	53.8	32.2
Swaziland	144.3[c]	137.6[c]	134.1	128.2
Tanzania	61.4	42.2	82.1[h]	151.3[h]
Uganda	...	...	65.4	54.5
Zaire	170.0	105.5	153.1[g]	115.3[g]
Zambia	90.6	85.3	99.1[h]	92.9[h]
Western Africa				
Cameroon	189.3	145.9	195.5[h]	161.5[h]
Central African Republic	193.2	98.0	147.2[h]	91.9[h]
Chad	122.1	41.1	105.0	43.4
Congo, People's Republic of the	214.7	175.5	216.2[h]	199.4[h]
Gabon	293.2	299.1	452.1	441.5
Gambia, The	36.4	19.1	46.[illegible]	22.6
Ghana	94.1	82.6	103.8	85.3
Ivory Coast	105.8	68.8	116.1[h]	78.2[h]
Mali	35.3	20.7	50.7[h]	29.7[h]
Mauritania	28.8	10.2	...	...
Nigeria	58.8	43.0	75.5[f]	56.6[f]
Senegal	55.5	38.0	66.3[e]	44.4[e]
Sierra Leone	59.3[d]	36.0[d]	74.5[h]	53.1[h]
Upper Volta	20.9	12.3	24.2	14.1

Gross Enrollment Ratios for Grade 1 as Percentages of the Total Number of Six-Year-Old Children, by Country and Sex, 1966 and 1976 (continued)

Region*/Country	1966		1976	
	Male	Female	Male	Female
Europe, Middle East, and North Africa				
Afghanistan	41.2	6.2	50.0	9.3
Algeria	81.1	57.9	104.3	81.0
Egypt	86.3	61.5	90.1[g]	61.1[g]
Greece	124.0	119.6	110.5[h]	104.4[h]
Iran	111.5	59.8	137.2	101.9
Iraq	105.1	52.5	138.1	104.5
Ireland	...	...	116.3	111.6
Jordan	119.9	112.1	87.7	83.0
Morocco	76.8	39.7	93.7	56.6
Portugal	157.9	152.7	132.5[h]	129.1[h]
Romania	114.5	113.5	105.5[f]	104.3[f]
Spain	137.8	140.8	120.9	120.7
Syria	116.9	72.7	125.8	99.6
Tunisia	141.7[b]	98.5[b]	115.6	89.3
Turkey	123.7	97.0	121.8[g]	103.9[g]
Yemen Arab Republic	32.8	2.6	67.8[f]	9.4[f]
Latin America and the Caribbean				
Barbados	...	...	161.7	158.0
Bolivia	150.0	122.9	137.4[g]	129.9[g]
Chile	173.0	165.2	155.6	147.6
Colombia	151.2	154.6	170.7	169.0
Costa Rica	158.2[a]	148.8[a]	128.1	122.6
Dominican Republic	222.8	205.7	...	...
Ecuador	158.5	153.3	149.8	147.2
El Salvador	162.2	152.2	169.8	161.2
Guatemala	121.1	99.9	135.4[h]	115.1[h]
Guyana	162.8	149.9	118.5	121.0
Honduras	...	...	180.0[h]	166.0[h]
Jamaica	...	...	104.7	102.5
Mexico	172.2	164.3	175.2	169.2
Nicaragua	180.7	176.8	173.8[f]	171.2[f]
Paraguay	196.3	177.3	156.5[h]	143.9[h]
Peru	175.2	177.9	138.1[i]	133.1[i]
Trinidad and Tobago	103.9	94.7	97.9[h]	95.4[h]
Venezuela	136.0	124.0	141.1[h]	131.2[h]

Symbol: *Countries are grouped by region according to World Bank grouping of borrowing countries. "Asia" region includes both "East Asia" and "South Asia."

... data not available.

[a] 1964 [d] 1968 [g] 1974
[b] 1965 [e] 1972 [h] 1975
[c] 1967 [f] 197 [i] 1977

Source: Data from the Statistical Division of Unesco.

Rates of Repetition in Selected Countries, 1970-76

(percent)

Region*/Country	Year	Grade in first cycle					
		1	2	3	4	5	6
Asia							
Burma	1973	25	20	19	18	15	—
India	1970	26	20	18	17	16	—
Indonesia	1975	16	11	11	9	7	2
Korea, Republic of	1975	—	—	—	—	—	—
Malaysia	1974	—	—	—	—	—	—
Papua New Guinea	1972	74	3	2	2	1	2
Singapore	1974	—	—	3	4	4	27
Sri Lanka	1976	14	12	12	12	18	—
Thailand	1975	19	12	11	4	7	4
Eastern Africa							
Botswana	1975	—	—	—	—	—	—
Burundi	1974	19	18	25	26	31	39
Kenya	1975	5	3	4	5	4	7
Lesotho	1975	9	4	4	3	3	3
Madagascar	1973	24	15	14	15	10	16
Malawi	1974	19	17	15	12	10	13
Rwanda	1974	27	18	17	21	18	24
Somalia	1974	—	—	—	—	—	—
Sudan	1971	—	—	4	4	3	9
Swaziland	1975	9	6	8	11	11	11
Tanzania	1971	1	1	1	3	—	—
Zaire	1971	27	24	23	19	19	18
Zambia	1974	—	1	1	4	1	1
Western Africa							
Benin	1974	17	16	20	19	27	36
Cameroon	1973	32	24	25	20	23	35
Central African Republic	1974	32	37	24	26	29	36
Chad	1975	41	34	32	28	32	57
Congo	1974	32	26	31	26	25	34
Gabon	1974	50	33	29	21	21	23
Gambia, The	1975	7	4	4	5	6	35
Ghana	1975	5	2	2	2	1	1
Ivory Coast	1973	21	21	22	21	27	46
Mali	1970	25	23	27	23	29	37
Niger	1974	8	13	17	15	19	36
Senegal	1972	11	14	15	16	18	34
Togo	1975	37	24	26	20	25	34
Upper Volta	1974	14	12	14	14	19	36

Rates of Repetition in Selected Countries, 1970-76 (continued)
(percent)

Region*/Country	Year	Grade in first cycle					
		1	2	3	4	5	6
Europe, Middle East, and North Africa							
Algeria	1975	7	9	13	12	13	21
Egypt	1974	—	14	—	15	—	13
Greece	1973	8	5	4	2	2	1
Iran	1970	11	11	8	7	7	9
Iraq	1973	20	16	13	17	32	18
Jordan	1974	—	—	7	8	7	4
Kuwait	1974	14	15	16	12	—	—
Morocco	1975	23	20	26	30	44	—
Oman	1974	6	9	12	8	7	4
Saudi Arabia	1974	17	13	14	22	15	9
Syria	1974	12	12	10	9	7	8
Tunisia	1975	11	13	14	14	19	41
Yugoslavia	1973	7	5	4	3	7	7
Latin America and the Caribbean							
Argentina	1975	21	12	10	6	5	3
Brazil	1974	24	17	11	10	12	11
Chile	1974	19	15	13	10	9	8
Colombia	1974	20	16	13	11	8	—
Costa Rica	1975	—	13	14	—	8	3
Dominican Republic	1970	33	21	18	13	10	6
Ecuador	1973	17	14	11	11	10	9
El Salvador	1974	14	9	6	5	3	2
Guatemala	1972	26	14	12	7	5	2
Guyana	1973	18	7	7	6	8	14
Mexico	1965	22	14	13	11	9	4
Nicaragua	1973	16	11	9	8	6	3
Panama	1974	21	18	15	9	7	3
Paraguay	1974	25	20	16	11	7	3
Peru	1975	15	12	9	8	7	4
Uruguay	1973	30	18	16	14	13	7
Venezuela	1974	—	—	—	10	9	—

Symbol: *Countries are grouped by region according to World Bank grouping of borrowing countries. "Asia" region includes both "East Asia and Pacific" as well as "South Asia."
— zero or negligible.
Source: Data from the Statistical Division of Unesco.

Survival Rates of the 1970 Cohort of Students in Selected Countries

Country	Percentage of students enrolled in Grade 1 reaching Grade 2	reaching Grade 3	reaching Grade 4	reaching Grade 5	reaching Grade 6
Asia					
India[b]	67.7	56.7	48.1	41.1	...
Indonesia[c]	94.4	87.2	81.4	68.0	56.6
Singapore[c]	100.0	100.0	98.6	97.5	95.8
Sri Lanka[b]	82.8	75.5	75.4	63.0	...
Thailand[f]	91.0	88.9	85.4	45.7	41.3
Eastern Africa					
Botswana	91.5	91.5	91.5	87.8	83.5
Burundi[d]	83.6	77.6	66.1	56.6	44.9
Kenya	88.6	87.2	83.0	77.7	77.7
Lesotho	76.1	71.3	62.3	56.7	47.0
Madagascar	78.9	61.2	43.9	29.1	24.6
Rwanda	74.8	63.6	53.6	42.7	33.2
Sudan	98.1	93.3	91.6	89.4	75.0
Swaziland	91.0	90.6	83.7	76.7	69.0
Tanzania	95.5	90.9	88.4	85.5	85.4
Zaire	75.4	65.1	53.8	45.9	40.6
Zambia[a]	98.3	97.2	34.4	79.9	78.2
Western Africa					
Benin	75.9	71.2	66.3	64.0	60.1
Cameroon[c]	77.4	73.6	67.9	62.5	57.5
Central African Republic	71.2	61.5	51.3	46.3	40.1
Chad[e]	61.1	49.9	36.8	31.6	28.5
Congo	89.1	87.2	81.0	77.4	70.8
Gabon	71.7	69.8	60.6	55.9	50.4
Gambia	98.2	97.1	97.0	97.0	95.1
Ghana	87.2	83.5	79.2	74.8	71.6
Ivory Coast[c]	93.4	91.3	85.3	82.0	80.2
Mali	84.4	72.8	62.5	56.5	49.4
Niger	89.3	79.2	69.6	63.2	59.7
Senegal	93.3	85.7	77.8	70.8	66.0
Togo	85.6	81.8	75.4	73.5	68.7
Upper Volta	85.4	71.5	64.5	57.4	54.0

Annex 10

Survival Rates of the 1970 Cohort of Students in Selected Countries (continued)

Country	Percentage of students enrolled in Grade 1 reaching Grade 2	reaching Grade 3	reaching Grade 4	reaching Grade 5	reaching Grade 6
Europe, Middle East, and North Africa					
Afghanistan[e]	92.2	90.1	72.1	63.5	57.1
Algeria[c]	98.1	97.0	92.3	88.4	73.7
Austria	95.7	94.5	94.2	...	...
Egypt	96.4	93.2	89.7	83.2	79.3
France	95.3	92.8	92.8	87.1	...
Greece	98.2	97.6	96.6	95.8	95.2
Iran[b]	87.4	82.5	79.1	75.2	70.1
Iraq	89.5	86.5	85.1	81.4	75.0
Italy	100.0	99.6	98.5	97.2	...
Jordan	92.1	91.6	90.8	88.5	84.4
Morocco	86.0	81.8	77.0	73.1	...
Oman[e]	87.7	83.3	74.8	58.9	55.0
Portugal	97.4	94.5	88.5	...	...
Syria	97.6	96.1	92.8	87.8	81.7
Tunisia	91.6	83.8	78.5	74.9	70.0
Yugoslavia	98.1	96.9	96.0	...	...
Latin America and the Caribbean					
Brazil	58.8	50.6	43.2	38.2	33.2
Chile	90.1	85.3	81.8	76.7	71.6
Colombia	69.1	55.1	41.3	37.5	69.5
Costa Rica	94.2	89.2	83.8	77.7	73.2
Dominican Republic[b]	64.3	53.8	41.5	33.7	28.8
Ecuador	75.3	69.0	63.7	57.2	55.1
El Salvador	67.8	56.0	49.7	42.9	37.8
Guatemala	66.6	53.8	42.3	34.7	30.9
Guyana	99.9	99.9	95.0	86.4	86.4
Nicaragua	56.3	44.8	36.7	30.6	26.6
Paraguay	84.5	72.1	60.2	48.9	39.4
Peru[c]	77.6	67.7	64.0	57.7	52.6
Uruguay	100.0	98.7	98.6	94.8	94.2
Venezuela	90.2	85.1	71.9	65.5	61.7

Symbols: ... data not available.

[a] 1968. [d] 1972.
[b] 1969. [e] 1973.
[c] 1971. [f] 1974.

Source: Data from the Statistical Division of Unesco.

Annex 11

Lending by World Bank for Education and Training, 1963–69, and 1970–78[a]

Year or period	Lending for education: In million U.S. dollars: World Bank	IDA	Total	As percentage of total project costs	As percentage of all sector lending	Price deflator constant fiscal 1976
1963–69	93	153	246	57	3.0	n.a.
1970	52	28	80	59	3.7	52.2
1971	68	40	108	48	4.3	64.6
1972	133	47	180	47	6.1	72.9
1973	162	132	294	57	8.6	81.4
1974	134	19	153	54	3.5	88.3
1975	127	97	224	59	3.8	94.2
1976	245	76	321	54	5.2	100.0
1977	204	85	289	46	4.2	105.7
1978	269	83	352	53	4.0	111.2
Total	1,487	760	2,247	53	4.6	n.a.

Symbol: n.a. "not applicable."

[a] The figures for 1970-78 refer to the fiscal period (July 1 to June 30).

Annex 12

Lending by World Bank for Education and Training as Components of Lending to Other Sectors

(in million U.S. dollars)

Fiscal year	Education component: In rural development projects[a]	In urban development projects	In agriculture and population projects	Project-related training	Total
1973	...	2.1	...	...	...
1974	...	1.3	...	...	...
1975	...	7.3	...	37.0	...
1976	1.5	1.8	...	67.0	70.3
1977	9.2	7.5	...	92.0	108.7
1978	16.8	3.7	45.5	99.0	165.0

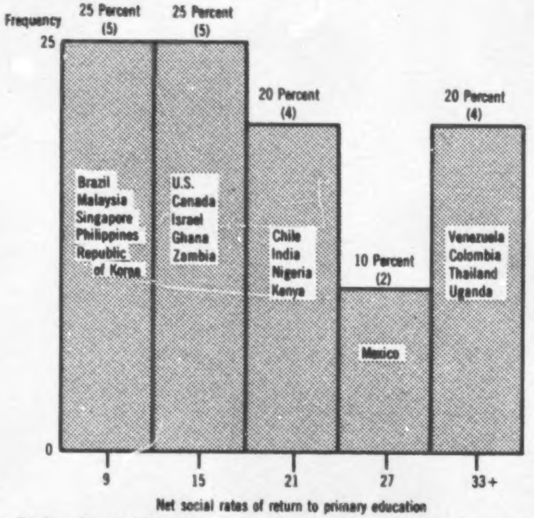
... data not available.

[a] Lending for education only; lending for extension is not included.

Annex 13

Results of Studies Relating Primary Schooling to Net Social Rates of Return in Selected Countries

Mean: 26.2 Percent
Number of Countries: 20



Source: Based on data from George Psacharopoulos, *Returns to Education: An International Comparison* (Amsterdam: Elsevier Scientific Publishing Company, 1973).

Percentage Distribution of Expenditures for Education by Level of Education, 1975

Group of countries according to GNP per capita[a]	Number of countries	Primary		
		Cumu-lative	Median	Range
Low (less than $265)	23	55.5	49.7	25.9-71.1
Lower middle ($265-520)	16	39.3	37.3	23.5-60.5
Intermediate middle ($521-1075)	19	39.9	39.7	26.4-61.2
Upper middle ($1076-2500)	7	39.9	41.3	32.0-54.9
Total, all developing countries	65	41.1	43.3	23.5-71.1
OECD countries	17	33.3	35.9	22.7-58.7

Source: Based on data compiled by Unesco.

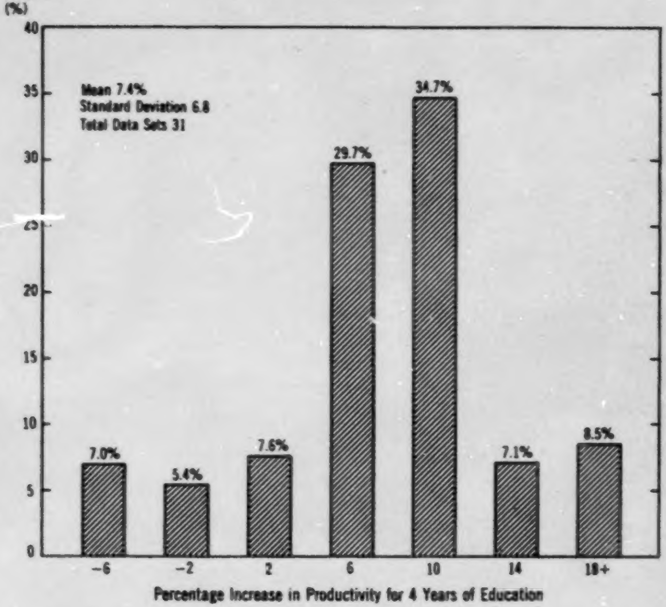
[a] For definition of groups of countries, see Annex 1.

Secondary			Higher		
Cumulative	Median	Range	Cumulative	Median	Range
29.1	32.5	19.6-58.8	15.4	16.0	1.5-32.0
38.0	34.7	8.2-59.6	22.7	26.7	3.4-54.5
23.0	30.1	7.6-49.3	37.1	21.6	7.9-56.8
27.1	28.9	14.0-35.2	32.9	27.3	14.8-46.2
27.0	30.6	7.6-59.6	31.8	21.6	1.5-56.8
34.9	38.7	21.0-58.6	31.8	24.1	9.7-41.9

Annex 15

Results of Studies Relating Schooling to Agricultural Productivity

(weighted by reciprocal of the standard error)



Source: World Bank, 1979

Percentage of Students Enrolled in Private Schools, by Country and Level, 1965 and 1975

Region*/Country	First level 1965	First level 1975	Second level 1965	Second level 1975
Asia				
Bangladesh	...	8	...	9
Indonesia	12	13	...	60
Korea, Republic of	1	1	48	45
Philippines	4	5	66	38
Singapore	40	35	3	1
Sri Lanka	...	6	9	...
Thailand	13	11	50	32
Eastern Africa				
Botswana	4	5	10	30
Burundi	96	92	30	22
Ethiopia	25	25	15	...
Kenya	4	1	29	49
Lesotho	96	100	100	89
Madagascar	27	23	66	49
Malawi	77	10	5	13
Mauritius	34	28	77	6
Sudan	2	2	45	13
Swaziland	80	80	4	...
Tanzania	7	4	...	29
Zaire	91	...	57	...
Zambia	...	24	4	2
Western Africa				
Benin	40	5	54	18
Cameroon	61	43	73	57
Central African Republic	...	...	2	...
Chad	12	10	7	6
Equatorial Guinea	...	24	...	3
Gabon	53	45	43	32
Gambia, The	...	16	54	46
Ivory Coast	28	19	...	28
Liberia	25	35	48	43
Mali	8	4	10	11
Niger	6	5	5	14
Nigeria	76	...	...	41
Senegal	13	12	22	...
Sierra Leone	...	78	...	87
Togo	40	29	55	16
Upper Volta	34	7	38	43

Percentage of Students Enrolled in Private Schools, by Country and Level, 1965 and 1975 (continued)

	First level		Second level	
Region*/Country	1965	1975	1965	1975
Europe, Middle East, and North Africa				
Algeria	2	1	7	1
Cyprus	1	...	11	13
Egypt	13	...	41	22
Iran	8	8	26	17
Iraq	2	1	24	...
Jordan	28	30	13	7
Libya	3	2	7	0
Morocco	6	5	14	8
Saudi Arabia	6	3	4	2
Syria	10	5	37	6
Tunisia	2	1	18	6
Turkey	1	...	...	2
Yemen Arab Republic	...	1	...	3
Latin America and the Caribbean				
Argentina	14	17	41	45
Barbados	...	9	26	21
Bolivia	26	9	26	24
Brazil	11	13	49	25
Chile	27	18	38	23
Colombia	14	15	58	38
Costa Rica	4	4	24	6
Dominican Republic	7	12	...	...
Ecuador	18	17	38	30
El Salvador	4	6	47	47
Guatemala	19	14	54	43
Haiti	26	42	43	76
Honduras	7	5	53	51
Jamaica	...	5	...	9
Mexico	9	6	29	25
Nicaragua	16	15	44	...
Panama	5	5	17	14
Paraguay	10	13	51	37
Peru	14	13	24	17
Suriname	...	65	57	52
Trinidad and Tobago	...	...	41	...
Uruguay	18	17	17	...
Venezuela	13	11	23	18

Symbol: *Countries are grouped by region according to World Bank grouping of borrowing countries. "Asia" region includes both "East Asia and Pacific" as well as "South Asia."

... data not available.

Source: Data from the Statistical Division of Unesco.

Annex 17

World Bank/IDA Education Projects, 1963-79[1]

Country	Project	Fiscal year	Main purpose	In million U.S. dollars Total cost of project	Amount of loan or credit World Bank	IDA
Asia						
Bangladesh	I*	1973	University and postsecondary technical and agricultural, teacher training (T.A.)	36.4		21.0
	II	1976	Agricultural extension and credit cooperative training (T.A.)	16.5		12.0
	III	1979	Technical training centers, inplant training (T.A.)	32.4		25.0
China	I	1970	Secondary and postsecondary technical and agricultural, teacher training (T.A.)	15.0	9.0	
India	I	1973	Agricultural university, computer center, curriculum development (T.A.)	19.4		12.0
Indonesia	I	1971	Secondary technical (T.A.)	7.6		4.6
	II	1972	Agricultural secondary, adult training (T.A.)	12.3		6.3
	III	1973	Teacher training, learning materials, curriculum development (T.A.)	39.2		13.5
	IV	1976	Technical secondary and university, nonformal vocational and skill training centers (T.A.)	64.2	37.0	
	V	1977	Teacher training	42.8	19.0	
	VI	1978	Nonformal education, materials development, staff inservice training (T.A.)	33.1	15.0	
	VII	1979	Polytechnics technician, training, accountancy training, planning and management (T.A.)	104.0		49.0
	VIII	1979	Agricultural secondary, inservice training (T.A.)	71.0	42.0	
Korea, Republic of	I	1969	Secondary and postsecondary technical and agricultural (T.A.)	26.8		14.8
	II	1973	Engineering science and school of education at universities, teacher training, agricultural and technical secondary (T.A.)	70.2	23.0	20.0
	III	1975	Secondary technical, postsecondary technical and agricultural, technical university and vocational institutions	39.1	22.5	

World Bank/IDA Education Projects, 1963-1979[1] (continued)

Country	Project	Fiscal year	Main purpose	Total cost of project (In million U.S. dollars)	Amount of loan or credit: World Bank	Amount of loan or credit: IDA
	IV	1978	Vocational training, instructor training (T.A.)	56.0	23.0	
Malaysia	I	1969	Secondary general, technical, agricultural and teacher training	16.4	8.8	
	II	1972	Secondary technical, university science education, educational TV	28.4	15.5	
	III	1974	Secondary general, postsecondary general and technical, teacher training	41.4	19.0	
	IV	1977	Primary and primary teacher training; secondary industrial, nonformal community service centers, school mapping planning (T.A.)	124.6	35.0	
	V	1979	Lower secondary schools and related staff training, civil service staff training, long-range planning of occupational needs (T.A.)	121.1	38.0	
Nepal	I	1978	Secondary and higher-level technician education	7.8		5.7
Pakistan	I*	1964	Agricultural university, postsecondary technical and teacher training (T.A.)	9.0		4.5
	II	1964	Agricultural university, postsecondary technical and teacher training (T.A.)	17.0		8.5
	III*	1966	Agricultural university and postsecondary technical (T.A.)	21.7		13.0
	IV	1970	University technical (T.A.)	12.8		8.0
	(New) III	1977	Primary teacher training, postsecondary agricultural and rural training, agricultural university, adult functional literacy (T.A.)	27.3		15.0
	V	1979	Primary education, teacher training center, inservice teacher training, supervision, instructional materials and curricula	17.2		10.0
Papua New Guinea	I	1977	Secondary technical, rural vocational and teacher training, postsecondary agricultural and health sciences, primary teacher training (T.A.)	7.4		4.0

World Bank IDA/Education Projects, 1963-1979[1] (continued)

				In million U.S. dollars		
					Amount of loan or credit	
Country	Project	Fiscal year	Main purpose	Total cost of project	World Bank	IDA
Philippines	I	1965	Agricultural university	11.7	6.0	
	II	1973	Agricultural university, agricultural secondary schools, technical and vocational institutions, educational development centers (T.A.)	17.7		12.7
	III	1976	Textbooks production and distribution, teacher training, curriculum development, mass media study (T.A.)	51.6	25.0	
	IV	1977	University of the Philippines (College of Forestry, Veterinary Medicine, and Department of Animal Science), postsecondary agricultural, rural development training centers (T.A.)	45.3	25.0	
	V	1978	Primary educational radio, inservice teacher training	3.9	2.0	
Singapore	I	1972	University technical (T.A.)	20.0	9.5	
	II	1974	University law, arts and science (T.A.)	42.0	19.5	
Thailand	I	1967	Secondary technical and agricultural (T.A.)	21.0	6.0	
	II	1972	Agricultural university (T.A.)	28.3	15.4	
	III	1973	General secondary, university, teacher training (T.A.)	39.0		19.5
	IV	1976	Secondary general, adult education and training (T.A.)	78.4	31.0	
	V	1979	Vocational center, diversified secondary, educational radio, inservice civil service training, school mapping studies (T.A.)	70.3		35.0
Eastern Africa						
Botswana	I	1976	Secondary general and teacher training, nonformal adult education and training (T.A.)	15.5	10.5	
Burundi	I	1977	Primary, and primary teacher training, textbook production (T.A.)	12.5		10.0
Ethiopia	I	1966	Secondary general, technical and teacher training	10.7		7.2

World Bank/IDA Education Projects, 1963-1979[1] (continued)

				In million U.S. dollars		
					Amount of loan or credit	
Country	Project	Fiscal year	Main purpose	Total cost of project	World Bank	IDA
	II	1971	Secondary general, secondary technical and agricultural	13.4		9.5
	III	1973	Secondary general, agricultural training, university school of science, teacher training, education materials production center, science curriculum development center (T.A.)	12.7		10.0
	IV	1975	Primary, secondary general and agricultural, postsecondary technical, health and medical training, university social science development (T.A.)	34.7		23.0
Kenya	I	1967	Secondary general, technical and teacher training	9.7		7.0
	II	1970	Secondary technical, university agricultural and adult and teacher training (T.A.)	9.3		6.1
	III	1976	Primary teacher training, educational broadcasting, mobile unit (T.A.)	18.0	10.0	
	IV	1978	Agricultural education, primary, rural training, curriculum development (T.A.)	31.0		23.0
Lesotho	I	1975	Secondary general and post-secondary technical	8.1		4.0
	II	1978	Secondary technical, secondary general, trade testing, teacher training, curriculum development (T.A.)	9.3		7.5
Madagascar	I	1968	Secondary general, technical and teacher training	7.2	4.8	
	II	1977	Regional education/teacher training centers, learning materials production, textbook development (T.A.)	19.3		14.0
Malawi	I	1967	Secondary general and teacher training	7.0		6.3
	II	1976	Primary and secondary general, primary teacher training, rural education centers, pre-investment study (T.A.)	15.0		11.6

World Bank/IDA Education Projects, 1963-1979[1] (continued)

Country	Project	Fiscal year	Main purpose	In million U.S. dollars		
				Total cost of project	Amount of loan or credit: World Bank	Amount of loan or credit: IDA
	III	1979	Primary, secondary, technical teacher training, inservice training, management of education, curriculum development, textbooks (T.A.)	25.7		14.5
Mauritius	I	1975	Secondary general adult, agricultural and industrial training centers	11.6	3.5	3.5
	II	1978	Institution building, primary teacher training, junior secondary, central training office, educational T.V. and radio (T.A.)	25.2	15.2	
Rwanda	I	1975	Primary education, textbook production (T.A.)	9.0		8.0
Somalia	I	1971	Secondary general, technical; teacher training and nonformal agriculture (T.A.)	3.7		3.3
	II	1975	Secondary general, nonformal agricultural training centers, academic language studies (T.A.)	9.3		8.0
	III	1978	Basic education and rural skill training, nonformal trade testing and training, secondary agricultural, health, curriculum development, learning materials production (T.A.)	11.7		8.0
Sudan	I	1968	Secondary general, postsecondary agricultural and teacher training (T.A.)	15.4		8.5
	II	1975	Secondary general and technical, teacher training, rural education centers (T.A.)	18.9		10.0
Swaziland	I	1975	Secondary teacher training, postsecondary technical and vocational, nonformal agricultural training, curriculum development (T.A.)	7.1		5.0
	II	1978	Junior secondary, agricultural teacher training, program administration	6.4	4.0	
Tanzania	I	1964	Secondary general	6.0		4.6
	II	1969	Secondary general and teacher training	7.2		5.0

World Bank/IDA Education Projects, 1963-1979[1] (continued)

				In million U.S. dollars		
					Amount of loan or credit	
Country	Project	Fiscal year	Main purpose	Total cost of project	World Bank	IDA
	III	1971	Nonformal rural training and postsecondary agricultural (T.A.)	4.7		3.3
	IV	1973	Primary, secondary general, medical school university, technical secondary (T.A.)	14.6		10.3
	V	1976	Secondary general, village management technician training program, studies (T.A.)	15.0		11.0
	VI	1979	Technical secondary, vocational and instructor training centers, management and accountancy training	16.0		12.0
Uganda	I	1967	Secondary general	14.3		10.0
	II	1971	Secondary general and technical, postsecondary and nonformal agricultural, health and medical training (T.A.)	10.4		7.3
Zaire	I	1972	Secondary technical, primary and technical teacher training (T.A.)	11.8		6.5
	II	1976	Secondary technical and agricultural, postsecondary agricultural, rural primary teacher training, pre-investment and management studies (T.A.)	48.5		21.0
Zambia	I	1969	Secondary general, technical and teacher training	36.2	17.4	
	II	1970	University technical and teacher training	7.4	5.3	
	III	1973	Paramedical, health training centers, university school of agricultural sciences, farmer training centers, teacher training, secondary general, educational services center (T.A.)	40.1	33.0	
	IV	1977	Postsecondary commercial, nonformal agricultural and farmer training centers, farm and trades training institutes, educational services center, special studies (T.A.)	21.1	13.3	

World Bank/IDA Education Projects, 1963-1979[1] (continued)

In million U.S. dollars

					Amount of loan or credit	
Country	Project	Fiscal year	Main purpose	Total cost of project	World Bank	IDA
Western Africa						
Benin	I	1975	Basic and nonformal rural education and training (T.A.)	5.5		4.0
Cameroon	I	1970	Secondary general, technical, agricultural and adult and teacher training (T.A.)	14.0		10.5
	II	1972	Secondary general and technical, teacher training, nonformal adult technical (T.A.)	11.4		9.0
	—	1975	Supplementary credit to Cameroon I			1.2
	III	1976	Secondary technical and agricultural, postsecondary agricultural, rural health training (T.A.)	24.9	17.0	
Central African Republic	I	1972	Secondary general, postsecondary technical, teacher training (T.A.)	5.4		3.9
Chad	I	1969	Secondary agricultural and teacher training (T.A.)	2.1		1.8
	II	1971	Secondary technical and agricultural	3.1		2.2
	—	1974	Supplementary credit to Chad I and II			.9
	III	1978	Rural primary, teacher training, technical secondary, curriculum development (T.A.)	9.2		8.3
Congo, People's Republic of the	I	1971	Secondary general and technical teacher training, nonformal rural education (T.A.)	4.1		3.5
	II	1977	Primary and secondary technical teacher training, secondary agricultural educational publication/planning units (T.A.)	11.4	8.0	
	—	1977	Supplementary credit to Congo I			.5
Gabon	I	1968	Secondary general and teacher training	3.6	1.8	
	II	1975	Secondary technical and commercial (T.A.)	9.0	5.0	
The Gambia	I	1978	Secondary school upgrading, technical and vocational training, health training, management training, regional education centers (T.A.)	7.0		5.5
Guinea	I	1979	Secondary polytechnic and instructor training institutes (T.A.)	8.9		8.0

Annex 17

World Bank/IDA Education Projects, 1963-1979[1] (continued)

				In million U.S. dollars		
					Amount of loan or credit	
Country	Project	Fiscal year	Main purpose	Total cost of project	World Bank	IDA
Ivory Coast	I	1970	Primary, secondary general, technical, postsecondary technical, agricultural and adult and teacher training (T.A.)	19.1	11.0	
	II	1975	Secondary general and technical, primary teacher training, educational TV (T.A.)	8.7	5.0	
	—	1975	Supplementary credit to Ivory Coast I		2.2	
Liberia	I	1972	Secondary general, agricultural university, teacher training (T.A.)	9.6		7.2
	II	1976	Primary and primary teacher training, adult education center, curriculum development, textbook production (T.A.)	5.4	4.0	
	III	1977	Vocational training, forest ranger training, science/technology education and management of education and training	9.5	6.3	
Mali	I	1973	Technical teacher training, general secondary, technical education development (T.A.)	5.5		5.0
	II	1978	Agricultural training, farmer literacy program, rural lower secondary, management training (T.A.)	12.0		10.0
Mauritania	I	1974	Secondary technical, community development, vocational and teacher training (T.A.)	4.3		3.8
Nigeria	I	1965	Secondary general, technical, adult and teacher training	30.0		20.0
	II	1972	Postsecondary general, teacher training (T.A.)	27.8	17.3	
	III	1973	Secondary general, teacher training (T.A.)	107.4	54.0	
Senegal	I	1971	Secondary general and secondary technical and agricultural	2.3		2.0
	II	1975	Secondary general and technical, nonformal rural training center (T.A.)	21.2		15.0
	III	1979	Primary education (languages, teacher training, planning and research), technical teacher train-			

World Bank/IDA Education Projects, 1963-1979[1] (continued)

				In million U.S. dollars		
					Amount of loan or credit	
Country	Project	Fiscal year	Main purpose	Total cost of project	World Bank	IDA
			ing, vocational training, agricultural college, management training (T.A.)	33.1		22.0
Sierra Leone	I	1970	Secondary general, technical and teacher training (T.A.)	4.5		3.0
	II	1976	Secondary general, technical and teacher training, university (public administration and management), community development and training centers, educational planning unit (T.A.)	11.0		7.3
Upper Volta	I	1973	Secondary general, youth training, rural development training centers (T.A.)	3.6		2.9
Europe, Middle East, and North Africa						
Afghanistan	I	1965	Secondary technical, agricultural and teacher training (T.A.)	4.7		3.5
	II	1977	Agricultural secondary, pre-investment design for primary and secondary teacher training and the national materials and services center	11.5		6.0
	III	1979	Teacher training institutes (T.A.)	32.0		21.0
Algeria	I	1973	Technical and agricultural post-secondary and university (T.A.)	10.2	6.0	
	II	1976	Postsecondary technical, pre-investment studies (T.A.)	78.0	47.0	
	III	1977	Secondary technical and vocational, school mapping planning studies (T.A.)	111.9	48.5	
	IV	1978	Technician training, vocational training and technical instructor training, technical teacher training	150.5	90.0	
Egypt	I	1977	Vocational and trade instructor training centers, secondary comprehensive, technician training schools, technical teacher training (T.A.)	54.2		25.0

World Bank/IDA Education Projects, 1963-1979[1] (continued)

				In million U.S. dollars		
					Amount of loan or credit	
Country	Project	Fiscal year	Main purpose	Total cost of project	World Bank	IDA
	II	1979	Preparatory and secondary diversified schools, agricultural secondary, technician training, primary and technical teacher training, vocational training centers (industrial and construction trades), management training, population education (T.A.)	85.2		40.0
Greece	I	1971	Postsecondary technical (T.A.)	24.0	13.8	
	II	1973	University engineering and science, teacher training, technical and agricultural secondary, vocational training (T.A.)	43.9	23.5	
	III	1975	Secondary general, postsecondary technical, nonformal adult training (T.A.)	105.6	45.0	
	IV	1978	Secondary general, teacher training, secondary and postsecondary technical and vocational education (T.A.)	123.5	60.0	
Iran	I	1971	Primary, secondary general, technical and agricultural, teacher training, university (education) (T.A.)	41.7	19.0	
Iraq	I	1972	Secondary general and technical, postsecondary technical, nonformal adult agricultural and technical training, educational TV	19.9	12.9	
Ireland	I	1972	Secondary general and agricultural, postsecondary technical (T.A.)	33.0	13.0	
	II	1974	Secondary general, postsecondary technical, university agricultural, teacher training (T.A.)	62.8	25.0	
Jordan	I	1972	Secondary general and agricultural, postsecondary technical, teacher training (T.A.)	9.8		5.4
	II	1975	Secondary general and vocational, postsecondary technical, rural development center	17.5		6.0
Lebanon	I	1973	Basic and secondary general, teacher training (T.A.)	15.9	6.6	

World Bank/IDA Education Projects, 1963-1979[1] (continued)

				In million U.S. dollars		
					Amount of loan or credit	
Country	Project	Fiscal year	Main purpose	Total cost of project	World Bank	IDA
Morocco	I	1966	Secondary general, technical and agricultural	16.2		11.0
	II	1972	Secondary general and technical, agricultural teacher training, agricultural university, adult nonformal technical training (T.A.)	13.5		8.5
	III	1976	Primary education, secondary general, technical and teacher training, postsecondary technical; health education and training, rural development and hotel training centers (T.A.)	59.5	25.0	
	IV	1979	Secondary and postsecondary technical education, technical teacher training (T.A.)	216.6	113.0	
Oman	I	1974	Teacher training, agricultural secondary, youth training (T.A.)	11.1	5.7	
Portugal	I	1978	Postsecondary technician training, pre-apprenticeship vocational training, teacher training, management training	47.9	21.0	
Spain	I	1970	Primary, secondary general and teacher training (T.A.)	24.0	12.0	
	II	1972	Secondary general, technical teacher training, university technical (T.A.)	152.5	50.0	
Syria	I	1978	Primary and intermediate teacher training, technical intermediate, vocational training (T.A.)	40.3	20.0	
Tunisia	I	1963	Secondary general, technical and teacher training	9.2		5.0
	II	1967	Secondary general and agricultural	19.8		13.0
	III	1976	Primary education and teacher training, prevocational training, postprimary nonformal educational training (T.A.)	27.6	8.9	
Turkey	I	1971	Secondary and postsecondary technical, technical teacher training, nonformal management and adult technical training, science equipment production, mass media (T.A.)	17.9	13.5	

World Bank/IDA Education Projects, 1963-1979[1] (continued)

				In million U.S. dollars		
					Amount of loan or credit	
Country	Project	Fiscal year	Main purpose	Total cost of project	World Bank	IDA
Yemen Arab Republic	I	1974	Secondary general and agricultural, nonformal basic, teacher training (T.A.)	17.0		11.0
	II	1976	Primary teacher training, adult education and training, learning materials production, vocational training centers (T.A.)	11.9		8.0
	III	1979	Agricultural and livestock secondary, public administration institutes (T.A.)	21.4		10.0
Yemen, People's Democratic Republic of	I	1975	Secondary general, technical and agricultural, community development centers, teacher training (T.A.)	6.0		5.4
	II	1979	Vocational training (industrial, agricultural and commercial) (T.A.)	4.4		4.0
Latin America and the Caribbean						
Barbados	I	1979	Primary and secondary schools, primary and secondary teacher training, industrial (inplant) training (T.A.)	14.5	9.0	
Bolivia	I	1977	Basic education and vocational training	21.3	15.0	
Brazil	I	1971	Secondary technical and agricultural, postsecondary technical (T.A.)	21.0	8.4	
	II	1975	Basic and secondary general, teacher training (T.A.)	58.7	23.5	
	III	1977	Vocational training	92.5	32.0	
Chile	I	1966	Adult training	3.8	2.8	
	II	1970	Adult industrial and agricultural training	3.0	1.5	
	III	1970	Secondary agricultural and teacher training (T.A.)	14.0	7.0	
Colombia	I	1969	Secondary general	15.2	7.6	
	II	1970	Secondary general (T.A.)	13.0	6.5	
	III	1974	Primary agricultural, secondary general, postsecondary technical and teacher training, rural development center	33.5	21.2	

World Bank/IDA Education Projects, 1963-1979[1] (continued)

				In million U.S. dollars		
					Amount of loan or credit	
Country	Project	Fiscal year	Main purpose	Total cost of project	World Bank	IDA
Costa Rica	I	1973	Secondary general, adult training (T.A.)	9.4	6.2	
Dominican Republic	I	1971	Secondary general and teacher training (T.A.)	8.2		4.0
	II	1975	Primary and basic, secondary general, nonformal vocational and agricultural training centers (T.A.)	13.5	8.0	
Ecuador	I	1968	Secondary general, agricultural and technical and teacher training (T.A.)	10.2		5.1
	II	1975	Nonformal vocational training centers	7.9	4.0	
El Salvador	I	1969	Secondary general, technical and postsecondary agricultural (T.A.)	8.4	4.9	
	II	1974	Primary and basic education, youth training center (T.A.)	24.2	17.0	
	III	1978	Agricultural training, industrial training, management training (T.A.)	12.7	9.0	
	IV	1979	Rural basic education, inservice teacher training, textbooks and teaching materials, postsecondary technological, management, curriculum development (T.A.)	33.6	23.5	
Guatemala	I	1969	Secondary general, postsecondary agricultural and teacher training	12.6	6.3	
	II	1976	Secondary general and agricultural teacher training, studies (T.A.)	22.1	14.5	
Guyana	I	1969	Secondary general and teacher training (T.A.)	10.0	2.9	2.9
	II	1975	Secondary general, postsecondary agricultural technical training, health and agricultural rural training centers	18.9	8.0	4.0
Haiti	I	1976	Primary and basic education, primary teacher training (T.A.)	6.5		5.5
	II	1978	Primary, agricultural training, rural community development, secondary vocational, agricultural education, teacher training, radio education	12.7		10.0

Annex 17

World Bank/IDA Education Projects, 1963-1979[1] (continued)

Country	Project	Fiscal year	Main purpose	In million U.S. dollars Total cost of project	Amount of loan or credit World Bank	IDA
Honduras	I	1974	Vocational and agricultural training centers, teacher training (T.A.)	8.7	3.0	3.0
	II	1978	Rural primary, postsecondary agricultural and forestry (T.A.)	7.6		5.0
Jamaica	I	1967	Secondary general, postsecondary agricultural, technical, adult and teacher training (T.A.)	19.4	9.5	
	II	1971	Secondary general, teacher training, vocational training, educational TV (T.A.)	28.2	13.5	
Nicaragua	I	1968	Secondary general and teacher training	8.0	4.0	
	II	1976	Primary education, secondary general and agricultural, rural community and agricultural training centers (T.A.)	19.9	11.0	
Paraguay	I	1973	Secondary general, technical postsecondary (T.A.)	7.3		5.1
	II	1976	Nonformal vocational training, mobile training units (T.A.)	5.7	4.0	
	III	1977	Rural primary and community learning centers, primary teacher training, secondary general and multilateral, textbook production and school mapping (T.A.)	17.4	8.0	4.0
Peru	I	1974	Secondary general (T.A.)	40.0	24.0	
Trinidad and Tobago	I	1969	Secondary general and teacher training	18.8	9.4	
	II	1973	Secondary general, teacher training (T.A.)	19.7	9.3	
	III	1979	Primary, secondary, curriculum development center, teacher development center (T.A.)	54.6	20.0	
Uruguay	I	1978	Vocational training, mobile training, inplant training, technological development (T.A.)	16.8	9.7	

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[1] Loans from the International Development Association (IDA), the Bank's soft loan affiliate, are called "credits." Typically, IDA credits are made available to very poor developing countries for a period of 50 years, with 10 years of grace before repayments of principal begin. The credits carry no interest other than an annual service charge of 0.75 percent to cover administrative costs.

[2] Bangladesh 1 replaced Pakistan I and III.

(T.A.) . . . refers to "technical assistance."

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Credits

Cover: A water color painting of children playing in front of their schoolhouse in rural Ecuador.
1. World Food Programme, by R. Null
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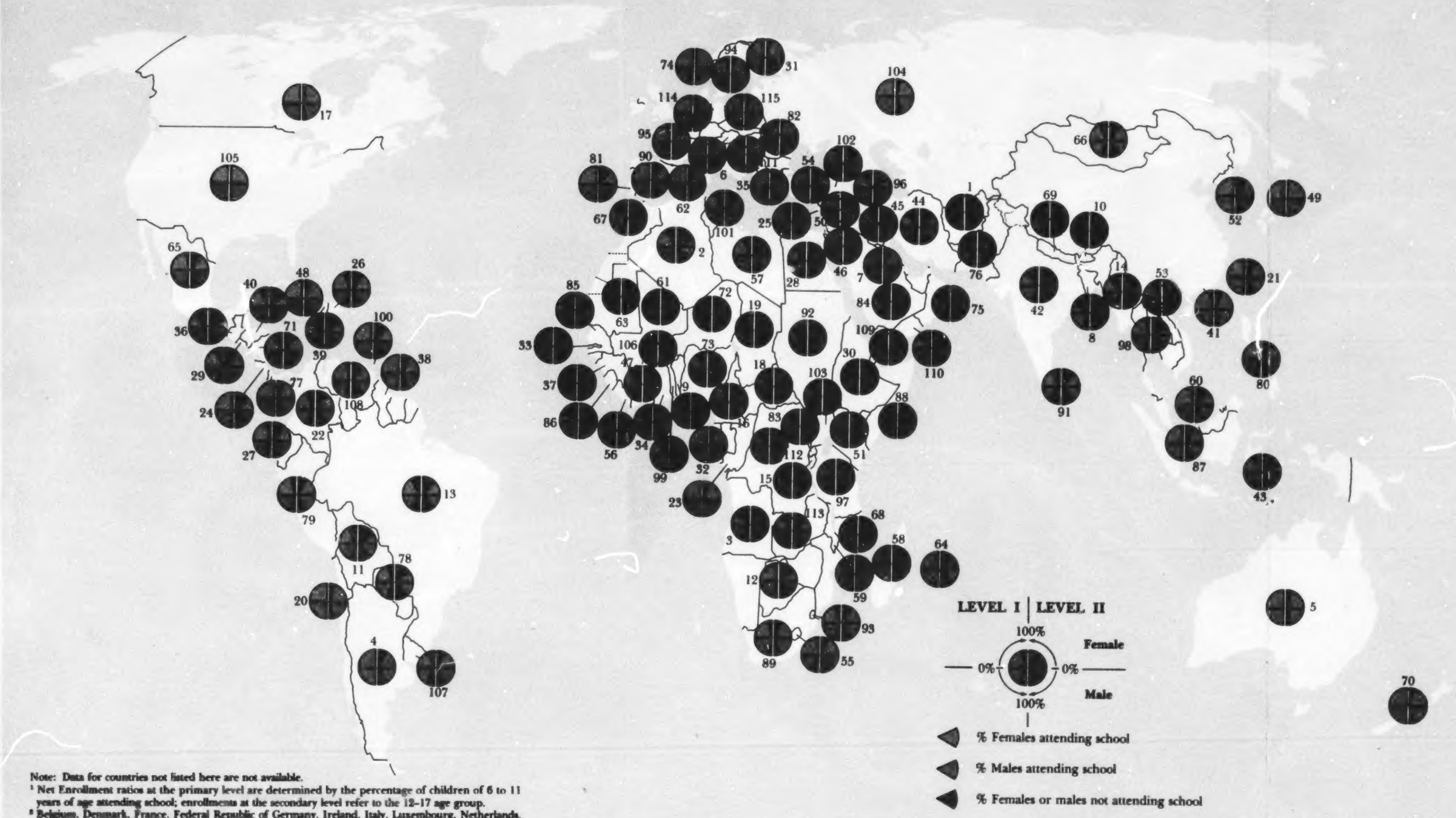
Foldout: World Bank map by Hans Stolle

Figure 8


LEVEL I
LEVEL II
100%
Female
0%
0%
Male
100%
% Females attending school
% Males attending school
% Females or males not attending school

Reference Number	Country	Reference Number	Country
1	Afghanistan	58	Madagascar
2	Algeria	59	Malawi
3	Angola*	60	Malaysia
4	Argentina	61	Mali
5	Australia*	62	Malta*
6	Austria*	63	Mauritania
7	Bahrain	64	Mauritius
8	Bangladesh	65	Mexico
9	Benin	66	Mongolia*
10	Bhutan*	67	Morocco
11	Bolivia	68	Mozambique*
12	Botswana	69	Nepal
13	Brazil	70	New Zealand*
14	Burma*	71	Nicaragua
15	Burundi	72	Niger*
16	Cameroon	73	Nigeria
17	Canada*	74	Norway*
18	Central African Republic	75	Oman
19	Chad	76	Pakistan
20	Chile	77	Panama
21	China, Republic of*	78	Paraguay
22	Colombia	79	Peru
23	Congo, People's Republic of the	80	Philippines
24	Costa Rica	81	Portugal*
25	Cyprus*	82	Romania*
26	Dominican Republic	83	Rwanda
27	Ecuador	84	Saudi Arabia*
28	Egypt	85	Senegal
29	El Salvador	86	Sierra Leone
30	Ethiopia	87	Singapore
31	Finland*	88	Somalia
32	Gabon	89	South Africa*
33	Gambia, The	90	Spain*
34	Ghana	91	Sri Lanka*
35	Greece*	92	Sudan
36	Guatemala	93	Swaziland
37	Guinea	94	Sweden*
38	Guyana	95	Switzerland*
39	Haiti	96	Syria
40	Honduras	97	Tanzania
41	Hong Kong*	98	Thailand
42	India	99	Togo*
43	Indonesia	100	Trinidad and Tobago
44	Iran	101	Tunisia
45	Iraq	102	Turkey
46	Israel	103	Uganda
47	Ivory Coast	104	USSR
48	Jamaica	105	United States*
49	Japan*	106	Upper Volta
50	Jordan	107	Uruguay
51	Kenya	108	Venezuela
52	Korea, Republic of	109	Yemen Arab Republic
53	Lao People's Democratic Republic*	110	Yemen, People's Democratic Republic of
54	Lebanon*	111	Yugoslavia*
55	Lesotho	112	Zaire
56	Liberia	113	Zambia
57	Libya*	114	European Economic Community[2]*
		115	Eastern Europe[3]*

Note: Data for countries not listed here are not available.

[1] Net Enrollment ratios at the primary level are determined by the percentage of children of 6 to 11 years of age attending school; enrollments at the secondary level refer to the 12–17 age group.

[2] Belgium, Denmark, France, Federal Republic of Germany, Ireland, Italy, Luxembourg, Netherlands, and United Kingdom.

[3] Bulgaria, Czechoslovakia, German Democratic Republic, Hungary, and Poland.

* Data refer to 1975.

Source: Data from the Unesco Office of Statistics. See also Annex 6

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Net Enrollment Ratios at Primary and Secondary Levels in the World, 1977[1]

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